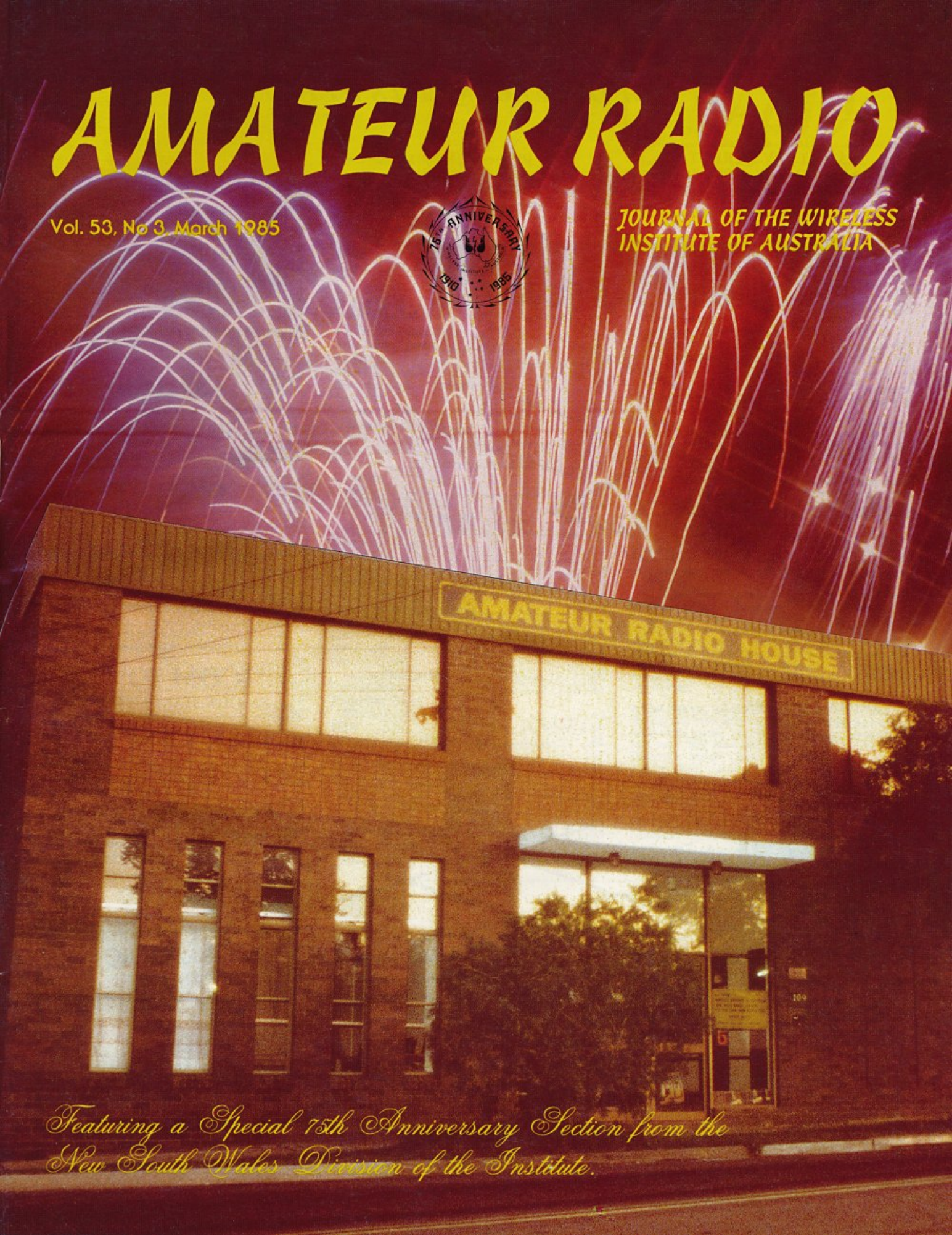
AMATEUR RADIO

Vol. 53, No 3, March 1985

JOURNAL OF THE WIRELESS INSTITUTE OF AUSTRALIA



Featuring a Special 75th Anniversary Section from the New South Wales Division of the Institute.

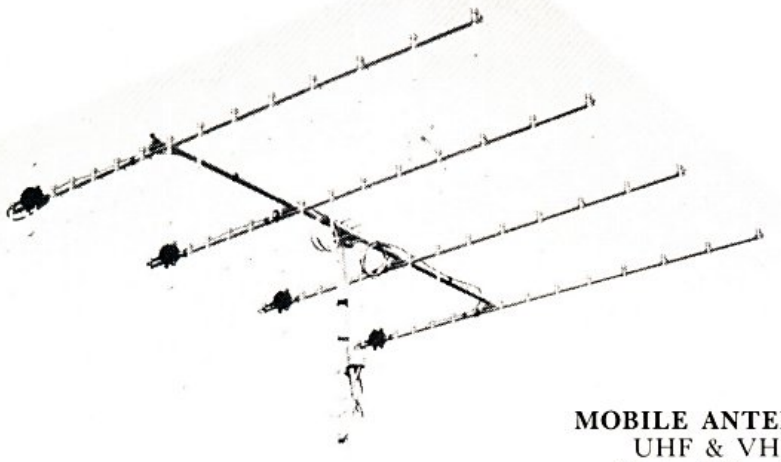
W & M DEVELOPMENTS PTY LTD

Head Office:
23 DALRAY STREET,
LALOR PARK, NSW 2147

Phone: 624 2691

Correspondence to:
P.O. Box 311,
SEVEN HILLS, NSW 2147

Antenna Systems



J/A A.N.C.S.

by ANTEN KYOGO

Japan's Leading Antenna Manufacturers

430 - 440	*2 STACK*
430 - 440	*4 STACK*
430 - 440	*8 STACK*

GY-715Q

20.0 dBi
430 MHz

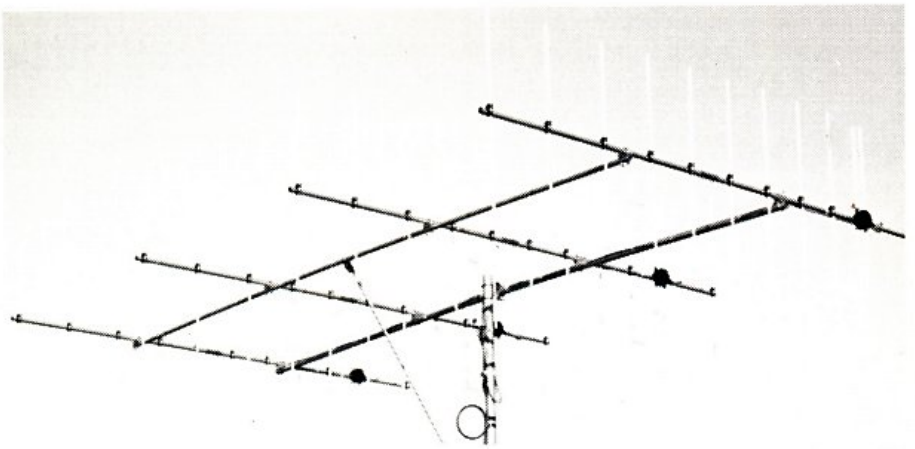
MOBILE ANTENNAS
UHF & VHF
Up to 7dB gain.

Sydney Agent for:

ICOM IC 40

UHF HANDHELD

PUMA LINEARS
UHF & VHF
Up to 600 watts.



ALINCO POWER SUPPLIES
2 amp to 55 amp

144 - 148	2 STACK
144 - 148	4 STACK

GY-211 SQ

144 MHz

For the amateur who is serious about his DX. Please call for info. — No more chasing bits and pieces. All systems are complete including cross booms.

Expected delivery mid-March. ORDER NOW.

AR85

AMATEUR RADIO

Cover Photograph by Henry Lundell VK2ZHE & Ken McLachlan VK3AH
Combined by Belken Productions

Watch for the details of the fireworks display at Dural in April.

TECHNICAL FEATURES

SPECIAL FEATURES

REGULAR FEATURES

Published monthly as the official journal by the Wireless Institute of Australia, founded 1910. ISSN 0002 — 6859. Registered Office: 3/105 Hawthorn Road, Caulfield North, Vic. 3161. Telephone: (03) 528 5962.

It has been very exciting putting this magazine together as there is so much diversified information in it.

Firstly this issue has a special VK2 Anniversary feature with much information which is not just VK2 orientated. Tim VK2ZTM and his helpers are to be commended for the amount of time and work they have put into this special section.

It is to be hoped to have a special feature from each division throughout this 75th Anniversary year. Next month's feature will be contributed by VK1 and from the copy that has already arrived from Fred VK1MM it will be well worth watching for.

For the Drew VK3XU fans, this month, page 14 is a construction article for an 80 metre transmitter. It is believed Drew has a special following for his well-designed gear and this transmitter is up to his usual excellence.

The Red Cross Marathon was staged again from Boxing Day and last month Gil VK3AUI gave us a photographic view of the race. This month we have another look from a different angle. David VK3YDF and the Melbourne Packet Radio group were in charge of the computers which were used for placings etc. On page 44 David shares the trials and tribulations of keeping computers cool and dust-free on the banks of the Murray.

STOP PRESS: *Ian VK5QX finally received the rules for the CQ WW WPX SSB contest after the magazine had gone to the printer. The rules are however the same as last year. See Ian's column, page 54, for his prior comments and the dates for this contest.*

DEADLINE

All copy for May 1985 AR (including Hamads, columns) must arrive at PO Box 300, Caulfield South, Vic 3162 at the latest by midday 22nd March 1985.

Enquiries and material to:
The Editor
PO Box 300, Caulfield South, Vic. 3162

Material should be sent direct to **PO Box 300, Caulfield South, Vic 3162**, by the **25th of the second month preceding publication. Note: Some months are a few days earlier due to the way the days fall. Phone: (03) 528 5962.** Hamads should be sent direct to same address.
Acknowledgement may not be made unless specially requested. All important items should be sent by certified mail. The editor reserves the right to edit all material, including Letters to the Editor and Hamads, and reserves the right to refuse acceptance of any material, without specifying a reason.

Trade Practices Act: It is impossible for us to ensure the advertisements submitted for publication comply with the Trade Practices Act 1974. Therefore advertisers and advertising agents will appreciate the absolute need for themselves to ensure that the provisions of the Act are complied with strictly.

Victorian Consumer Affairs Act: All advertisers are advised that advertisements containing only a PO Box number as the address cannot be accepted without the addition of the business or residential address of the box-holder or seller of the goods.

Production: BETKEN PRODUCTIONS
5 Maxfield Avenue, Mooroolbark, 3138.

Laser Scanned Colour Separations by: QUADRICOLOUR INDUSTRIES PTY LTD
Graphic Division
22-24 Glenvale Crescent, Mulgrave, 3170
Tel (03) 560 2222

Typesetting by: QUADRICOLOR INDUSTRIES PTY LTD,
22-24 Glenvale Crescent, Mulgrave, 3170.
Telephone: (03) 560 2222

Typesetting by: B-P Typesetting
Geddes St, Mulgrave, 3170
Tel: (03) 561 2111

Photographic film and processing material courtesy AGFA-GEVAERT LTD AUSTRALIA

Printers: WAVERLEY OFFSET PUBLISHING GROUP
Geddes Street, Mulgrave, 3170
Tel: (03) 560 5111

BEAT THE PRICE RISE!

Here's the equation:

US Dollar all time high against Aust. dollar
+ Japanese Yen all time high as well
+ Factory price rises in Japan last year

= Massive price rises on amateur gear: immediately!

That's right: no matter which currencies amateur gear is purchased in, it is all imported. And because of the weakening Aussie dollar PLUS hefty price increases overseas last year, prices of all amateur gear in Australia will increase – drastically – very shortly.

A word to the wise: if you want to re-equip your station, do it this month!

Even if you have to obtain credit (Bankcard, Visa, Mastercard or even personal finance through Custom Credit Corp*) you'll be much better off buying now and paying interest than waiting!

DICK SMITH ELECTRONICS PTY LTD

Custom Credit · bankcard welcome here · MasterCard · VISA

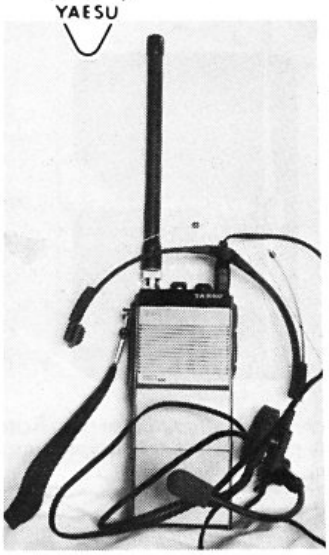
*To Approved Personal Customers

AR85

NEW 2m FM HANDHELDS from YAESU

YAESU

bail



FT203R

2.5 watt
144-148 MHz

VOX operation with optional YH-2 Headset.

Thumbwheel Channel Selection.

PA-3 DC/DC Car Adapter/Trickle Charger (option)

FT209R

3.5 watt/350 mW

FT209RH

5 watt/500 mW

Microprocessor controlled

10 Memories

Reverse Repeater

Power Saver to extend battery life

VOX operation with optional YH-2 Headset

PA-3 DC/DC Car Adapter/Trickle Charger (option)

The HF Allmode Transceiver you have been waiting for — from **YAESU**

FT-757GX

100 watts Output PEP/DC — 25 watts AM Carrier — 13.4 volts DC (19 amps for 100 watts output) — Weight 4.5 kg

FEATURES:

- *Dual VFOs and eight memories*
- *Programmable Memory Scanning*
- *SSB AM-FM Modes Standard*
- *Squelch on all Modes*
- *Full Break-in CW*
- *Accessories installed include 600Hz CW Filter, iambic keyer with dot-dash memory, marker, IF shift and width. N.B. (only option is CAT interface to extended computer control)*
- *High performance General Coverage Receiver*

bail

BAIL ELECTRONIC SERVICES
38 FAITHFUL STREET, WANGARATTA 3677
Telephone: (057) 21 6260 — Telex: 56880
AGENTS IN ALL STATES **Mail Orders and Bankcard Welcome**

bankcard welcome here
MasterCard VISA
Stan Roberts and Staff — VK3BSR

AR85

a word from your EDITOR

1910 TO 1985

On the 11th March 1910 the foundation meeting of our Institute was held in Sydney. This is the month of the 75th anniversary of the oldest amateur radio society in the world. And as you may have realised by now, we are celebrating!

How has radio evolved over those 75 years? Broad-band brute-force spark telegraphy was succeeded by pure CW as the advent of valves in 1913 and developments during the 1914-1918 war made stable frequencies possible. Telephony appeared at this time, and by 1920 the first broadcasting stations, many run by amateurs, were on the air.

As the new entertainment medium expanded enthusiasts built their own broadcast receivers, and were motivated to transmit as well. The number of amateurs increased steadily. Ships, aircraft, as they progressed from wood and wire, and later, automobiles, were to gain much in safety and profitability by the evolution of mobile radio. Much of the improving technology was initiated and developed by people who were operators, technicians and engineers during working hours and amateur experimenters as well.

Television came, with the first regular programmes, from London, in 1936. Then the world erupted into the 1939-1945 war. Amateurs became military technicians and operators, and the pace of development accelerated tremendously. Pre-war, the amateur market had been the main source of income for many manufacturers, and their amateur-band gear was often the prototype on which military equipment was based.

Of the thousands of amateurs in uniform during the war, many sacrificed their lives in action. Each August the WIA renews their memory in the Remembrance Day Contest.

Peace had barely succeeded war, when in 1948 came possibly the greatest development ever to shape the course of history. Without the transistor there would be no airborne or spacecraft computers, no spacecraft, no satellites, no world-wide TV, little international telephone traffic, no pocket radios and calculators. Our present lightweight mobile radios, with digital synthesizers and readouts would simply be impossible. Personal computers? Ridiculous!

Amateurs joined the Space Age in 1961 with OSCAR 1. The WIA was involved with the construction of OSCAR 5 in Melbourne in 1969. We now have OSCAR 10 relaying amateur messages internationally.

If there is one word which crystallizes the aims of the WIA in 1985 it is "international". Yes, we now have members from several overseas countries. But our purpose is to join together all Australian amateurs in working towards consistent international frequency allocations, regulations, licensing, satellite system standards and so on. This will increase international understanding by facilitating contact between more and more amateurs in all countries.

You can help! Join the WIA. If you are a member, but only passively, there may be a place for you in your Divisional Council, on Executive, or in one of many committees. We want to hear your ideas and opinions. There's a whole future in front of us!

Bill Rice VK3ABP
Editor
AR

SPECIAL DEPARTMENT OF COMMUNICATIONS RELEASE

Robert Lionel Lear of Blaxland, a suburb of Sydney, was convicted in a Parramatta court on Monday, 14th January 1985 of two counts of erecting and establishing a transmitter without authorisation, and two counts of using a transmitter without authorisation for the passing of messages.

Mr Lear was sentenced to six months gaol on each of the four counts, to be served concurrently.

Mr Lear had previously been convicted of an offence of establishing an unauthorised transmitter, in February 1984, and was then fined $100.

The Department of Communications has seized 78 items of radio equipment from Mr Lear. Some or all of these items may be forfeited to the Commonwealth under the provisions of the Wireless and Telegraphy Act 1905.

Mr Lear was prosecuted under the Wireless and Telegraphy Act. A new Act governing use of the radio frequency spectrum, The Radiocommunications Act, will soon come into force and provide for far higher penalties for breaches.

This new Act also contains provisions for seizure of and forfeiture of equipment used in committing offences.

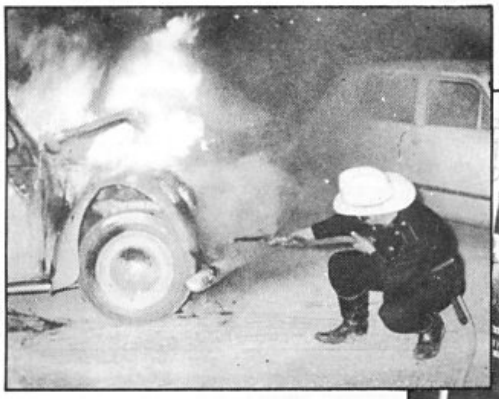
The Department is stepping up its investigations of illegal use of the radio frequency spectrum across Australia because of the extent of interference to other services caused by these activities.

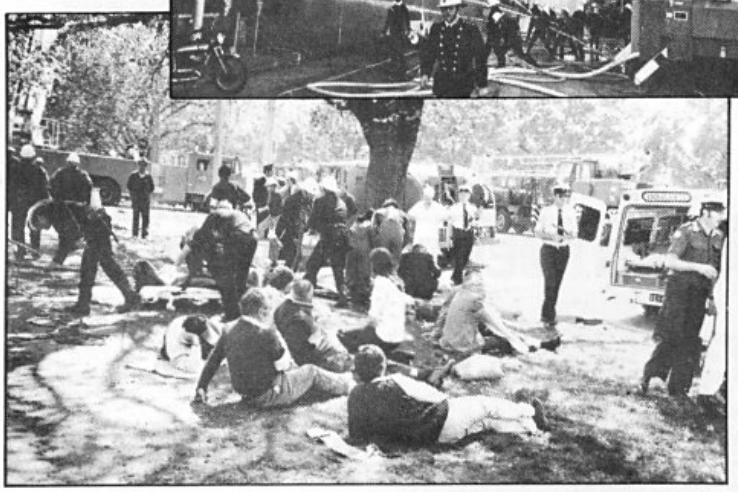
AR

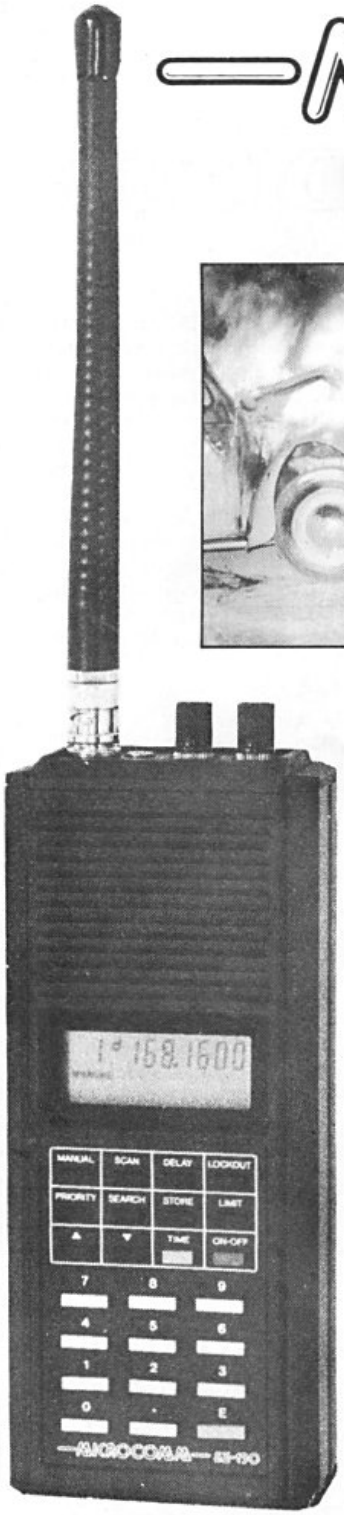
MICROCOMM

gives you . . .

ACCESS TO ACTION







26 to 32, 68 to 88, 138 to 176 and 380 to 512 MHz

SPECIAL PRICE $399 NEW FOR 85

SX-155 with improved performance and long battery life

PROGRAMMABLE POCKET SCANNER WITH OVER 16,900 CHANNELS & 160 MEMORIES

SX-155

The Microcomm SX-155 represents the latest developments in State-of-the-art LSI CMOS technology as applied to scanning monitor receivers. It incorporates many features, a lot of which are not even found in today's larger base scanners.

For example the SX-155 has 160 memory channels which can be programmed in either of two modes. The first allows you to manually program the entire 160 channels. The second mode provides for manual programming of the first 40 channels with the top 120 reserved for use by the SX-155 while in its SEARCH mode. It uses these channels to automatically store frequencies on which it has found signals during the search phase.

The SX-155 also features a Priority Channel (for that important frequency). An LCD display providing readout of all receiver functions including an accurate crystal controlled 24 hour clock. Supplied complete with rechargeable Nicad batteries, charger, and BNC rubber duck antenna, the SX-155 is a must for anybody with an interest in monitoring.

AR85

GFS electronic imports

AUSTRALIAN DISTRIBUTOR

GFS ELECTRONIC IMPORTS

Division of GD & JA WHITER PTY. LTD.

17 McKeon Road, Mitcham, Vic. 3132
PO Box 97, Mitcham, Vic. 3132
Telex: AA 38053 GFS
Phone: (03) 873 3777 3 Lines

QSP

Marconi is acknowledged as being the first to demonstrate the ability to communicate without *wires* between two points. That was in 1895, only 90 years ago. His discovery started to end the isolation of the (then) remote parts of the world like Australia and in less than a century our lives are almost totally dominated by electronic technology.

Isolated though Australia may have been at the start of this century it is a credit to our early experimenters that they appeared to be ahead of their counterparts in other parts of the world. That they found the need to come together and form an *Institute* is amply demonstrated in the newspaper report "A WIRELESS ENTHUSIASTS' INSTITUTE" reproduced elsewhere in this Amateur Radio.

That first meeting — the records indicate — was this month in 1910 and resulted in an organisation almost as the 'science' itself. That meeting in 1910 was the first in the world to result in a national organisation and was two years ahead of Great Britain and four years before American experimenters decided that they had a need for a national representative body.

One wonders, as we enter the fourth quarter of this century, what it holds in store for both the Institute and the hobby in general. The end of each previous quarter saw a change in direction:

1935 ended the period of the Great War, start of broadcasting, the Great Depression and the formation of a professional body from our ranks (See IREE story Jan AR.)

1960 ended the period of another war and its resulting electronic development which provided an endless supply of 'disposal equipment'. It was also the start of television, space communications and 'off the shelf equipment' which changed many from constructor to purchaser and perhaps from experimenter to user.

1985 ends a period almost too complex to record and although we are living in it one can only speculate what it will be like in 2010.

This year should see the Radio Communications Act coming into effect, hopefully to the benefit of our hobby. At the Division's seminar last year on "Amateur Radio — towards new horizons", Roger Harrison VK2ZTB postulated on the future trends in amateur radio and predicted that increasing leisure time together with higher education standards would lead to unprecedented growth, particularly in the field of digital communications.

As David VK3ADW, Federal President, outlined in his Christmas message, the hobby of amateur radio has become diverse and complex. The Institute was formed to represent the experimenters movement and right through its history — while every amateur may not have been a member — it has tried to determine and represent their views. The common point of contact and ideas exchange allows the Amateur Radio Service to follow a united, rather than a fragmented course, for I am sure that the Institute will celebrate many more multiples of its 75th.

May I wish the Institute and its Members all the best as it enters the last quarter of its first century.

Jeffrey L Pages VK2BYY
President — NSW Division of the WIA.
10th January 1985.
AR

MARCH 1985

SUN	MON	TUE	WED	THU	FRI	SAT
Palm Sunday CQ WW WPX SSB Test Conclusion of VI3 prefix Summer Time comm in Europe		Dates correct at time of printing.			**1** St David's Day Look for GB2SDD	**2** ARRL DX Phone Test
3 ARRL DX Phone Test M-85 Period Shifts Commence VK Daylight Savings Ceases	**4** Labour Day (VK6 & 7)	**5**	**6**	**7** Educ Net 80 m — 1030 & 1130	**8** VK2 GM	**9** VK3 Nat Park Activity Commonwealth Test QCWA Phone QSO Party
VK3 Nat Park Activity WIA Anniv CW Test VK75A used for 1st Time Commonwealth Test VK2 Dural BBQ QCWA Phone QSO Party	Labour Day (VK3) VK3 Nat Park Activity RAOTC QSO Party Final Date for WIA Poster Comp	**12**	**13** VK3 GM	**14** Educ Net 80 m — 1030 & 1130	**15** VK4 GM Hungarian Nat Day	**16** YL ISSB CW QSO Party Bermuda Test
17 YL ISSB CW QSO Party VK2 Fox Hunt Championship St Patrick's Day Bermuda Test	**18** Canberra Day VK2 Fox Hunt Championship	**19**	**20**	**21** Educ Net 80 m — 1030 & 1130 Autumn Equinox	**22** AR Copy Deadline	**23** BARTG RTTY Test "Open line" from HCJB at 0700 UTC VK5 GM
24 BARTG RTTY Test	**25** BARTG RTTY Test Greek Nat Day VK1 GM	**26**	**27**	**28** Educ Net 80 m — 1030 & 1130 UTC	**29** Sydney Show Opens	**30** VK2 AGM CQ WW WPX SSB Test

KENWOOD

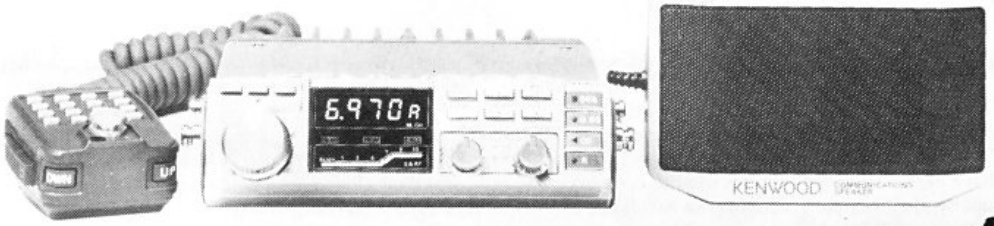
THE WORLD'S LEADER IN AMATEUR RADIO EQUIPMENT

R-2000 COMMUNICATIONS RECEIVER

World's leading all mode receiver.

TM-211A 2M FM MOBILE TRANSCEIVER
Complete with SW-100A SWR Meter.

Has new Digital Code Squelch system (DCS) – 25W Output.



TS-43X HF TRANSCEIVER
Complete with MB-430 and FM-430

The most versatile transceiver of the 80's.

TH-21A 2M FM POCKET TRANSCEIVER
Complete with Soft Case.

Ultra small.

TRIO-KENWOOD (AUSTRALIA) PTY. LTD.

(INCORPORATED IN N.S.W.)
4E WOODCOCK PLACE, LANE COVE, SYDNEY, N.S.W. 2066.
Ph. (02) 428 1455.

Further, beware of dealers not listed in this advertisement who are selling Trio-Kenwood communications equipment. All Kenwood products offered by them are not supplied by Trio-Kenwood (Aust.) Pty. Ltd. and have no guarantee applicable.

YOUR DEALER BELOW WILL GUARANTEE SATISFACTION

NEW SOUTH WALES
TRIO-KENWOOD (AUST.) P/L — 4E WOODCOCK PLACE, LANE COVE (02) 428 1455
EMTRONICS — 94 WENTWORTH AVENUE, SYDNEY (02) 211 0988
WASSIL ELECTRICAL — 71 SUMMER STREET, ORANGE (063) 62 5249
REG STOCKMAN COMMUNICATIONS — CNR BANOCKBURN RD. & SHIRLEY ST., INVERELL (067) 22 1303
ELECTRON 2000 — 3 ELIZABETH STREET, TIGHES HILL, NEWCASTLE (049) 69 6399
MACELEC PTY. LTD. — 99 KENNY STREET, WOLLONGONG (042) 29 1455
E&K COMMUNICATIONS — 14 DUTTON STREET, DICKSON A.C.T. (062) 49 6437
DX ENGINEERING — 5 JASMINE STREET, PORT MACQUARIE (065) 82 0175
LAND LINK — MULLALEY ROAD, GUNNEDAH (067) 42 2838
LAND LINK — 61 BARNES STREET, TAMWORTH (067) 65 4622
LAND LINK — 108 BEARDY STREET, ARMADALE (067) 72 1665
FRANK BOUNDY — LISMORE (066) 86 2145

INTERSTATE
VIC: EASTERN COMMUNICATIONS — 168 ELGAR ROAD, BOX HILL (03) 288 3107
PARAMETERS PTY. LTD. — 53 GOVERNOR ROAD, MORDIALLOC (03) 580 7444
AM-COMM ELECTRONICS — 69 CANTERBURY ROAD, EAST CAMBERWELL (03) 836 7634
BRIAN STARES — 11 MALMSBURY STREET, BALLARAT (053) 39 2808
SUMNER ELECTRONICS — 78 KING STREET, BENDIGO (054) 43 1977
TAS: HOBBY ELECTRONICS — 477 NELSON ROAD, MT. NELSON (002) 23 6751
WATSONS WIRELESS — 72 BRISBANE STREET, HOBART (002) 34 4303
ADVANCED ELECTRONICS — 5A THE QUADRANT, LAUNCESTON (003) 31 7075
MARINE & COMMUNICATION — 19 CHARLES STREET, LAUNCESTON (003) 31 2711
V.K. ELECTRONICS — 214 MOUNT STREET, BURNIE (004) 31 7733
QLD: MITCHELL RADIO CO — 59 ALBION ROAD, ALBION (07) 57 6830
S.A. &
N.T.: INTERNATIONAL COMMUNICATIONS SYSTEMS PTY. LTD. — 8 NILE ST., PORT ADELAIDE (08) 47 3688
W.A.: ARENA COMMUNICATIONS SERVICES — 642 ALBANY HWY., EAST VICTORIA PARK (09) 361 5422
TRI-SALES — CNR NEWCASTLE & CHARLES STREETS, PERTH (09) 328 4160
WILLIS ELECTRONICS — 445 MURRAY STREET, PERTH (09) 321 2207
BAY RADIO — 18 BANKSIA STREET, BUNBURY (097) 21 2236
FORD ELECTRONICS — 209 HANCOCK STREET, DOUBLE VIEW (09) 446 4745

ARK5

TREASURY REPORT

YOU AND YOUR SUBSCRIPTION

When you pay your subscription to the WIA what happens to your hard earned cash?

At each annual convention, held in April, the Federal Finance Committee presents a budget for the year ahead concerning income and expenditure of the Federal Executive.

In August the budget is revised and the figures are used as a base for setting Federal dues payable from Divisions for the following year. In turn this enables Divisions to calculate the subscription rates for their members.

From the chart below you will see the largest income component is subscriptions and on the expenditure side "Amateur Radio" magazine.

This magazine accounts for approximately $12 of the Federal Component ($24.50 for 1985) of your annual subscription.

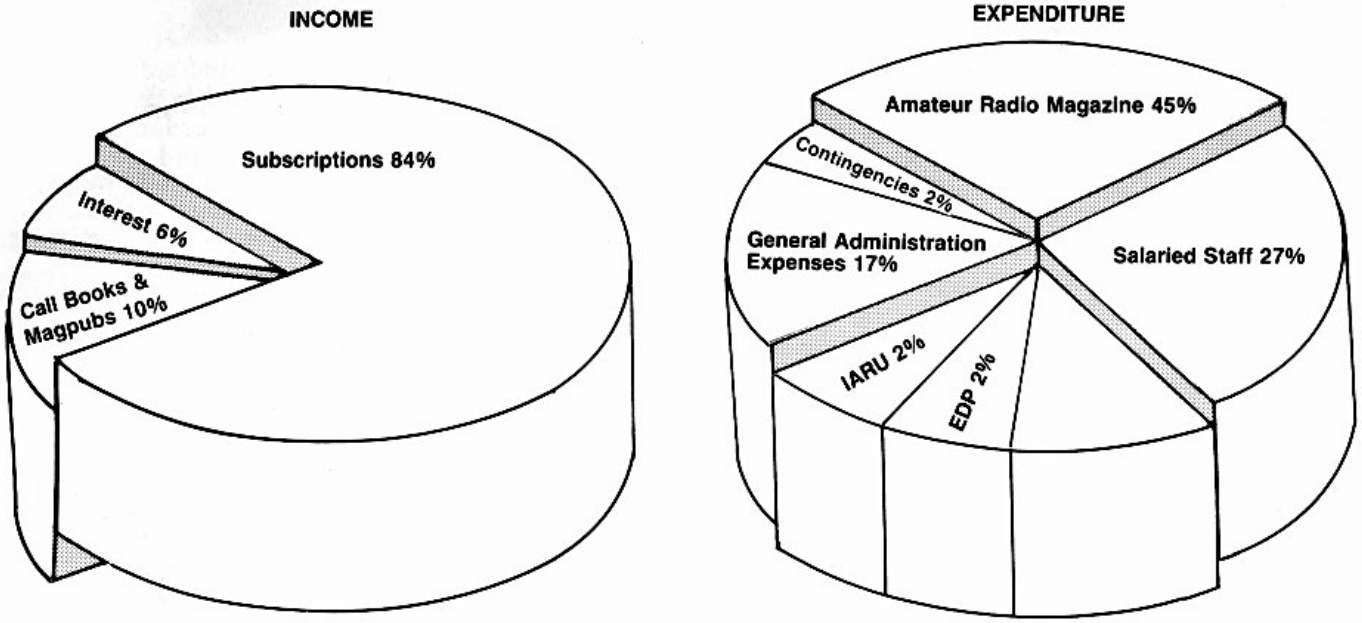
IARU membership absorbs approximately 50 cents per member of the Institute and the balance of the Federal Component is used by the Federal Executive in the performance of their various functions. One of their major expenses is the operations of the Federal Office, which assists the Federal Executive in their major function of acting in the interests of members by co-ordinating and dealing with Federal matters and major issues, so that our hobby is enhanced and does not go backwards, which could be so easy in this day and age. The remaining amount of your subscription goes to your Division who also need to act in our interests at a local level.

We need more members to make sure our hobby is never in jeopardy. Please endeavour to join a new member today. Approx 50 per cent of all amateurs are members of the WIA. Additional members will also help to keep our subscriptions down by sharing the costs.

Ross Burstal VK3CRB
FEDERAL TREASURER

AR

FEDERAL INCOME & EXPENDITURE FOR YEAR ENDED 1984



Amateur History

Alan Shawsmith VK4SS
35 Whynot Street, West End, Qld, 4101.

As the history of early OOTers is researched, it is apparent that many outstanding DX achievements occurred pre-WW11; it is a pity no official record book was created to register them for posterity. Almost all were made on QRP or QRPp — simply because those who used big bottles (QRO) were very much in the minority.

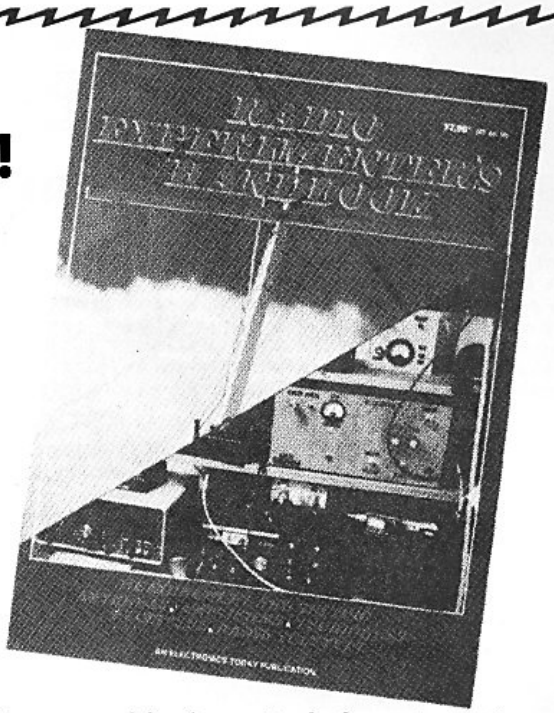
The three watt SPARK VK-W QSO by Roy Jonasson VK4NG is an outstanding effort; Marconi would have beamed with satisfaction. There were many others of equal merit, of course, Eric Lake VK4EL, credited with working more Gs than any other VK pre-WW11, also WACed with one-half watt into a simple vertical antenna, during a period when sun spot activity wasn't all that good. My next door neighbour of early days, George (Len) Greenhill VK4LE worked regularly into Europe LP 0700 UTC using loop modulated five watts phone (at best 1½ watts in the aerial which was a 66 feet end fed Zepp with fairly long 600 ohm feeders). Even the first Down Under DJs, ie those who operated on MW received some remarkable reports on their Broadcast Band activities. The official station of the Queensland Listeners League VK4QL was heard at good strength in the Eastern and Southern States, New Zealand, Fiji and Papua New Guinea — all on QRP.

It is only natural to ask, "*How was it all accomplished*?" That, like Marconi's spanning of the Atlantic Ocean in 1901, is something of a sixty-four dollar question. Lack of QRM and QRN (man made) no doubt played a big part. Most city suburban amateurs are now knee-deep in appliance pollution; this and low solar activity presently make QRPp DXing virtually impossible.

A record of another kind must be the re-joining of the WIA by an OOTer after a lapse of forty years. Norm VK4NR became an Institute member back in 1932 but let his membership lapse early post-war — now, after four decades, he has 'come in from the cold'. DOC would not re-issue him with a call until he sat for and passed his AOCP again. A stout effort for any OOTer, you'll agree! Norm's new call is VK4BNR.

AR

THE ONE YOU'VE BEEN WAITING FOR!



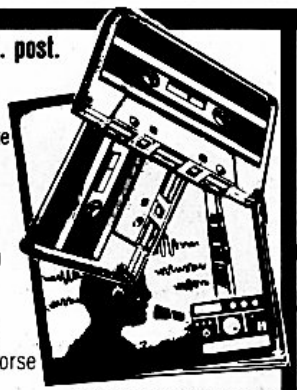
The **Radio Experimenter's Handbook**, Volume 1, from Electronics Today International is 132 pages chock-full of circuits, projects to build, antennas to erect, hints and tips. It covers the field from DX listening to building radioteletype gear, from 'twilight zone' DX to VHF power amplifiers, from building a radio FAX picture decoder to designing loaded and trap dipoles.

eti

Edited by Roger Harrison, VK2ZTB, this book carries a wealth of practical, down-to-earth information useful to anyone interested in the art and science of radio. $7.95 from your newsagent or through selected electronics suppliers. It is also available by mail order through **ETI Book Sales, P.O. Box 227, Waterloo NSW 2017** (please add $1.75 post and handling when ordering by mail).

AR85

TAPES $5 each inc. post.



- 5 Words per minute – Novice Licence
- 8-10-15 Words per minute – Exams
- 15 Words per minute

SPECIAL SPEEDS AVAILABLE ON REQUEST

NOVICE STUDY KIT

It contains:

- Theory Training Book
- DOC Regs Book or Morse Oscillator Kit
- Morse Code Training Tape

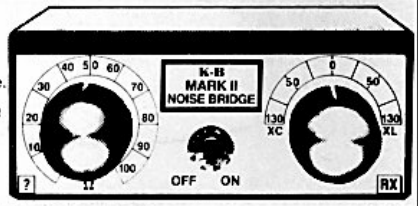
$16 post paid

NOVICE HANDBOOK $7.50 inc. postage

NOISEBRIDGE

Adjust your antenna for maximum performance. Measure resonant frequency, radiation resistance and reactance. Better than an SWR meter. Operates over 100 MHz. Most useful test unit in your shack.

$70 POST PAID



$65 POST PAID

HIGH PERFORMANCE ANTENNA TUNER

MULTI-BAND RECEIVER

COMPUTER OWNERS

SQUEEKY CLEAN MAINS FILTER $109

The Mains Filter with its own built-in filter and transient suppressor reduces the effect of electrical noise and spikes and increases the reliability of both hardware and software.
Each outlet is individually filtered.

Protect your computer from unnecessary power problems, say 'No' to dirty power.

240V AC at 6.0A TOTAL

SUITS ALL PC and Small Business Computers

AR85

COMPUTERS AVAILABLE SYDNEY ONLY

APII (48K) Computer	$445	Disk Drive (Slim)	$350
AP (64K) including 6502 & Z80 & NF keyboard		Printer	POA
Computer	$515	Amber Monitor	$195
Super (64K) Computer	$645	Colour Monitor (NTSC)	$395

POWER LINE FILTER

Single Filter with Dual Outlets.
240 Volt at 7.5 Amp.

$22 POST PAID

ANTENNA BALUNS

3 to 30 MHz.
Maximum Power 300 Watts.
Centre support.
Ideal for Dipoles, Beams, Quads.
S0239 connector.

$28 POST PAID

K BRUCESMITH
P.O. Box 216, Roseville, NSW, 2069
G. SCOTT
291 Kim Avenue, East Albury, N.S.W, 2640

WIA Seventy Fifth Anniversary News

This month — March 1985 is the ANNIVERSARY founding month of the Wireless Institute of Australia and is the real start of the celebrations of our 75th ANNIVERSARY year.

To celebrate the opening of the year the Institute has arranged that major events take place:

ANNIVERSARY CALLSIGN

After lengthy negotiations with the Department of Communications, a special callsign VK75A has been issued to the Federal body to celebrate the 75th anniversary.

This callsign will be activated for special events during the year.

The approval for the use of this callsign has been given subject to special conditions:

This station is authorised for use by a single "anniversary" station.

This station may, at the discretion of the WIA Executive, be rotated to locations in all states of Australia. Use of the station in this manner will be subject to normal operating conditions relating to amateur stations operating in a mobile capacity.

Approval for the use of this special non-standard callsign is given on a strictly "one off" basis, in the light of the exceptional circumstances of the 75th Anniversary of the Institute.

This special callsign will be used in the first instance during the 75th Anniversary year CW contest and then during special events and contests during the year. A special QSL card is being produced, and will be despatched to amateur stations contacted by this anniversary station.

There is no need for QSL cards to be sent to VK75A. Validated SWL reports will be QSLed.

CW CONTEST

Over the period from 0000 UTC to 2359 10 March 85 a CW contest is being run on behalf of the Institute by the VK2 Division. Rules for this event were published in the February issue of AR. The overall VK winner will hold the "Federal Presidents Cup" for 12 months, certificates and momentos will be awarded to all entrants whose logs show the necessary 75 contacts.

75TH AWARD

This award being run by the VK3 Division, on behalf of the Institute, commences this month — rules are published elsewhere in this issue.

Those entrants who qualify will receive a special certificate.

Be sure to make a note of the number printed on your AR address label for use during this award.

BOOK PACKS

To celebrate the 75th Anniversary of the Institute it has been decided to make book packs available for presentation by Divisions, Clubs and groups of amateurs to local schools and colleges.

These packs, provided at cost price to the donors, will contain basic readers and information on amateur radio for schools to hold in their libraries to enable study to be carried out. Included in the package will be material for use by the club or group making the presentation, on how to obtain some publicity for their club or group and amateur radio.

Two standards of book packs are available, $30 and $50 post free from the Federal office. To participate in this scheme, groups who wish to donate a book pack to a school should write to the Federal Secretary giving details of the proposal with a cheque for the pack required.

We would remind members that 1985, beside being the 75th Anniversary of the Institute, has also been declared the International "Year of Youth". This book pack scheme is one way that the Institute and its members can make a contribution to the Year of Youth.

NATIONAL FOXHUNT CHAMPIONSHIP

Supported by ICOM (Australia)

This event programmed to take place over the weekend 5/6th October 85 is being supported by ICOM (Australia) Pty Ltd. For this anniversary year the winning team will receive a handsome prize donated by ICOM (Australia) as well as an Institute Trophy and certificates.

FORMAL DINNER

As announced in the January edition of AR plans are going ahead for an Anniversary Dinner to be held in Melbourne on 9th November 1985. Invitations are at this time being prepared for posting to the presidents of all our sister societies, along with many for distinguished personalities in Australia and overseas. As previously mentioned in earlier editions of AR any member of the Institute who wishes to attend this important function should register their interest with the Federal Secretary. Space is limited, but a percentage of tables at the dinner are naturally being reserved for members who wish to attend.

DO YOU OWN A PIECE OF HISTORY OR ARE YOU A PIECE OF HISTORY?

As a result of the January article a number of members have contacted the Federal Secretary giving information.

Alan VK4SS has notified that he is aware of a couple of amateurs who are still active, Harry Angel VK4HA, 93 years young with a clear wit and voice who has held a licence since 1935 and is on air each day. Also Ock Alder VK4JB who was licensed in 1920.

Norman VK4BHJ writes to say that he celebrates his Silver Jubilee on air in June this year, having held a licence since 1925. He also mentions that he has some original papers from the GPO regarding his licence, one in particular from the Postmaster General authorises Norman, through his father to carry out experiments at 150 to 200 metres, shorter wavelengths could only be allowed where special justification could be shown.

The Federal office was visited by Bill Sievers VK3CB to pay his subs and during a quick chat it was discovered that Bill was operating as an amateur in Australia during 1918 and joined the Institute in 1922. *Is this a record?*

AR

SOME THOUGHTS ON RADIO FREQUENCY OSCILLATORS.

Harry Voake VK3AVQ
21 The Cresent,
Inverloch, Vic. 3996

For some time the writer has been interested in constructing a low drift 7 MHz variable frequency oscillator with its obvious advantage of shift as the frequency source of a low power (QRP) transmitter. With this in mind, considerable reading was done on the subject before attempting the construction of Hartley, Colpitts, Clapp, Seiler and Varkar oscillators. After several months, it was found that the last three configurations gave the best results but they failed in the goal set, which was less then 100 Hz frequency drift in the first hour from switch on.

All the oscillators used a field effect transistor (FET) either a 2N3819 or MPF102 as the active component followed by a two transistor buffer amplifier whose output was fed to a frequency counter. The unit was mounted on a printed circuit board made by the masking tape method (1). The power supply was a regulated 12 volt supply and the oscillator supply was further regulated by a 9 volt zener diode.

The capacitors in the tank circuit were of polystyrene type and the capacity values were made up by at least two smaller capacitors in parallel to reduce heating caused by circulating radio frequency current. (*Probably not significant — Tech Ed.*)

The tank coil was of square dimensions, ie the diameter and winding length were approximately equal. I used 24 SWG enamel copper wire for a high Q value without the use of a ferrite core; which is a potential source of drift. The wire was close wound on a thin wall plastic former and glued with Araldite. The inductor was found to have a positive temperature co-efficient — it caused a large frequency decrease in drift. So the coil was rewound on a ceramic former, obtained from a stripped down 20 watt wire wound resistor, and this gave considerable improvement by reducing the frequency decrease.

The unit was housed in a metal box bent up from 26 gauge galvanized iron sheet and pop rivetted/soldered together. Holes were drilled in both top and bottom to provide adequate ventilation.

The ceramic former coil and the associated polystyrene capacitors produced a drift of increasing frequency of about 300-400 HZ in the first hour. Many other capacitors — styrene, mica and NPO ceramic were tried in turn but no consistancy was obtained. the ceramic types were not satisfactory in that they occasionally caused frequency jumps of approximately 500-1000 HZ.

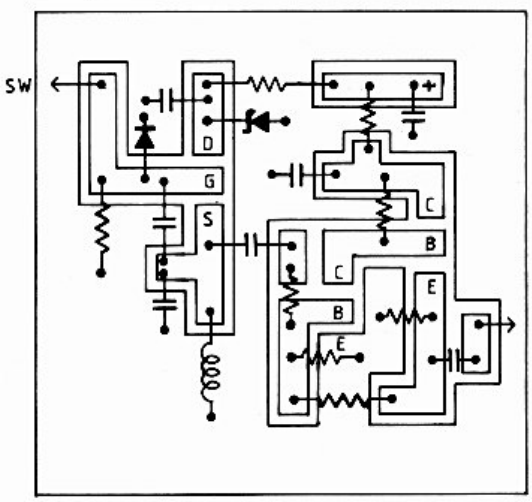


Figure 2 — VXO Board — copper side — full size

The internal heating of the FET was then considered and a flag heat sink using silicone grease was fitted around the plastic body. Also the clamping diode was changed from a silicon diode to a hot carrier diode. These actions made no detectable reduction of drift.

As a last resort, ceramic capacitors of suitable value and positive temperature co-efficient to cancel the small negative temperature co-efficient of the polystyrene capacitors were sought but could not be bought from radio retailers.

By this time — *The constructor's brow was furrowed*
The constructor's brow was low
Darkly looked he at the counter
And darkly at the VFO.

So the search for a low drift VFO was abandoned and a variable crystal oscillator (VXO) with its greater stability but less frequency shift was next considered.

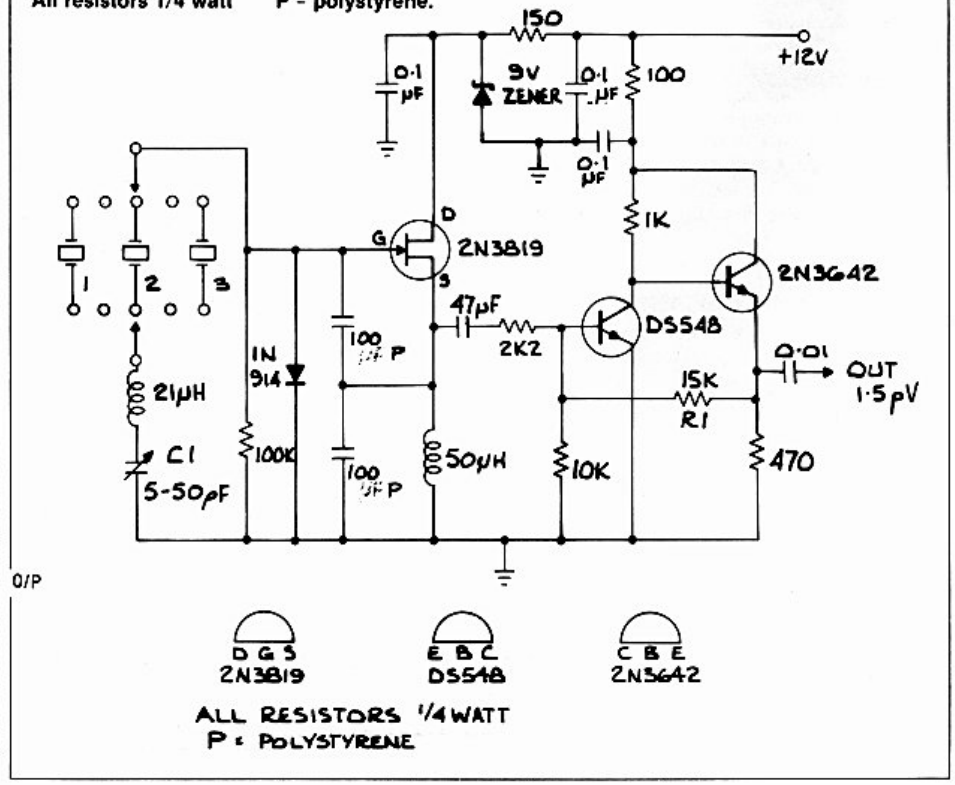
The VXO circuit decided upon was published some time ago in this magazine (2) and appealed to the writer because no special parts were required apart from suitable crystals (3).

The circuit diagram is shown in fig 1 and the printed circuit board, full size in fig 2, was made by the masking tape method (1) and mounted on 1/4 inch metal pillars in a metal box described above.

Some explanation of components might be helpful. The variable capacitor C1 is a small single bearing Polar type, approximately 5-50 pF which is mounted on the box wall through a 3/8 inch hole. This straight line capacity type will not produce a linear frequency scale unfortunately but is somewhat crowded towards the high frequency (low capacity) end.

The three crystals used are soldered directly to a two pole, five way wafer switch without the use of sockets to reduce interwiring capacities. Locate both the switch and the variable capacitor in the box in such a way as to reduce capacity to earth, for in keeping these unwanted capacities small, the fre-

Figure 1 — Circuit Diagram of 7 MHz VXO.
Crystal 1 — 7.002 MHz
Crystal 2 — 7.008 MHz
Crystal 3 — 7.017 MHz
All resistors 1/4 watt P = polystyrene.



quency shift is inceased.

The 21uH inductance is made by winding twenty six turns of 24 SWG enamelled copper wire on a Neosid 4327R/1/F25 toroid. The use of a toroid here is justified in that a small unit results with bearable drift. This inductance value in conjunction with the variable capacitor C1 produced the frequency shift that the writer required.

It should be noted that if an inductance alone were used in series, the crystal would be pulled to a frequency lower than its fundamental and the greater the inductive reactance (a larger inductance) the more the pulling effect. Similarly with a capacitor only in series, the crystal would be pulled to a higher frequency than its fundamental and a larger capacitive reactance (a smaller capacitor) produces more pull.

Therefore with both inductive and capacitive reactances in series with the crystal, the action of tuning the capacitor C1 will ensure that the reactances that are naturally in opposition will predominate in their turn and so produce a frequency shift spanning below and above the crystal fundamental frequency. If this pulling effect is carried too far, the oscillator will be no longer crystal controlled but rather a VFO with its greater drift problems.

Nominal Crystal Frequency	C1 — maximum Frequency	Drift	C1 — minimum Frequency	Drift	Frequency Shift
7.002 MHz	6,999,170	.39	7,005,160	-18	5990
7.008 MHz	7,004,850	-52	7,013,804	-22	8954
7.017 MHz	7,014,735	-23	7,019,715	-11	4980

FIGURES ARE IN HERTZ
DRIFT IS FOR FIRST HOUR AFTER SWITCH ON.

Figure 3 — Frequency shift and drift of VXO.

Fig 3 shows the results obtained and that the goal of less than 100 Hz drift in the first hour of operation is realized. The figures arrived at are an average of three experimental runs. Crystals 1 and 3 were bought recently and crystal 2 was a Pye type bought from disposals many years ago. Possibly this fact could explain the difference in drift figures.

The buffer amplifier is the well known shunt feedback, direct coupled amplifier. The combination produces a reasonably constant output level (a 10 percent decrease at the high frequency end). The radio frequency voltage output can be varied within limits by changing the value of the feedback resistor R1.

The frequency stability of the VXO is relatively insensitive to changes of supply volts, variations of voltage from 10 volts to 15 volts did not have any effect but did have an effect on output voltage as expected.

The tuning control can be calibrated with a frequency counter, or perhaps a reliable receiver to make sure the oscillator stays in the 7 MHz amateur band but nothing is better than continuous monitoring of the signal by a counter. Direct adjust of tuning is critical so if possible use a vernier drive to make things easier.

References: *1 "A Regenerative Receiver", H Voake, Amateur Radio August 1984 — p 8-9.*

2 "A Simple VXO", N Larelle, Amateur Radio March 1976 — p 13.

3 Rakon Australia Pty Ltd, 39 Scoresby Road, Bayswater, Vic 3153. **AR**

THUMBNAIL SKETCHES

Mark and Verle.

MARK WESTON — VK4XO

Mark Weston VK4XO (presently VK2CM Bateman's Bay, NSW) is an OT amateur who, until his retirement, was usually going somewhere — in almost every sense of the phrase he seems to have been forward bound in a positive manner. Here is a verbatim extract of some of his activities in AR. He says:

"First became interested in amateur radio in 1936 when I used to potter around in the projection room of the Paramount Theatre in Bundaberg and a chappie named M Laurie-Rhodes had an AR station set up in the back of the theatre. He used to broadcast on the Broadcast Band on Sunday mornings, callsign VK4XU. I enrolled with VK4 WIA for a correspondence course (Instructor Eric Lake VK4EL) CW; used to have three lessons a week (sixpence an hour) from Terry Tunny VK4TN who was a clickety-click on the Railways. I passed my AOCP late 1937 and first transmitter was 42ECO-42-42/42 with 10 watts input and a Hertz antenna — all CW. Had a 6pm sked daily with Cedric Marley VK4CJ until we were put off air late in 1939.

"During my pre-WW11 amateur days I used to go down and chat with the wireless operators on the sugar ships that came into Bundaberg and saw that was my future — so enrolled with The Marconi School in Sydney for a correspondence course. Obtained my Second Class COPC early 1940 and a couple of weeks later was a 'seagoing wireless operator'. Spent the war years mainly overseas on loan from AWA Marine Dept to Marconi Co and Notraship (Norwegian Government) — then later left the sea and joined Qantas Airways.

"My post-war equipment — well'. Until 1964 — Homebrew! Actually spent a lot of time with Screengrid and Suppressorgrid Modulation. Then with the Geloso 209 Twins. Then in 1964 my wife got her AOCP — so we went into commercial sideband with a Swan 240. Have been retired for eight years. We now have a Yaesu FT77 and dipoles all over the place, hi!"

After the war Mark held the calls VK2WE, VK2AWE, VK2AYK and since 1964 VK2CM. His main interest is on 80, 40 and 15 metres using both modes. He doesn't chase DX much now, mostly relaxes and rag chews. His outside interest is lawn bowls.

Mark feels that future AR will tend towards CB-type operation — and this will be unfortunate (I agree — Al).

An OM and YF team is always an asset in amateur radio; there should be many more such combinations — so, if you should hear Mark VK4XO/VK2CM or Verle VK2MR on air, give them a shout!

AR

DSB/CW TRANSMITTER FOR 80 METRES

Drew Diamond, VK3XU
Lot 2 Gatters Road, Wonga Park, Vic 3115.

Like to try your hand at building a little double sideband/CW transmitter? A DSB signal is easy to generate, and is a permitted mode (8K00A3E) on all bands. The only difference between DSB and SSB is that both sidebands are transmitted for the DSB signal. By ensuring that the audio is shaped or tailored before it is applied to the balanced modulator, tuning at the receiving end is easy, and an ordinary SSB receiver will resolve it. In addition, the listener has the choice of LSB or USB!

This transmitter was empirically designed using locally available parts. Output power is sufficient to drive previously described linear amplifiers.

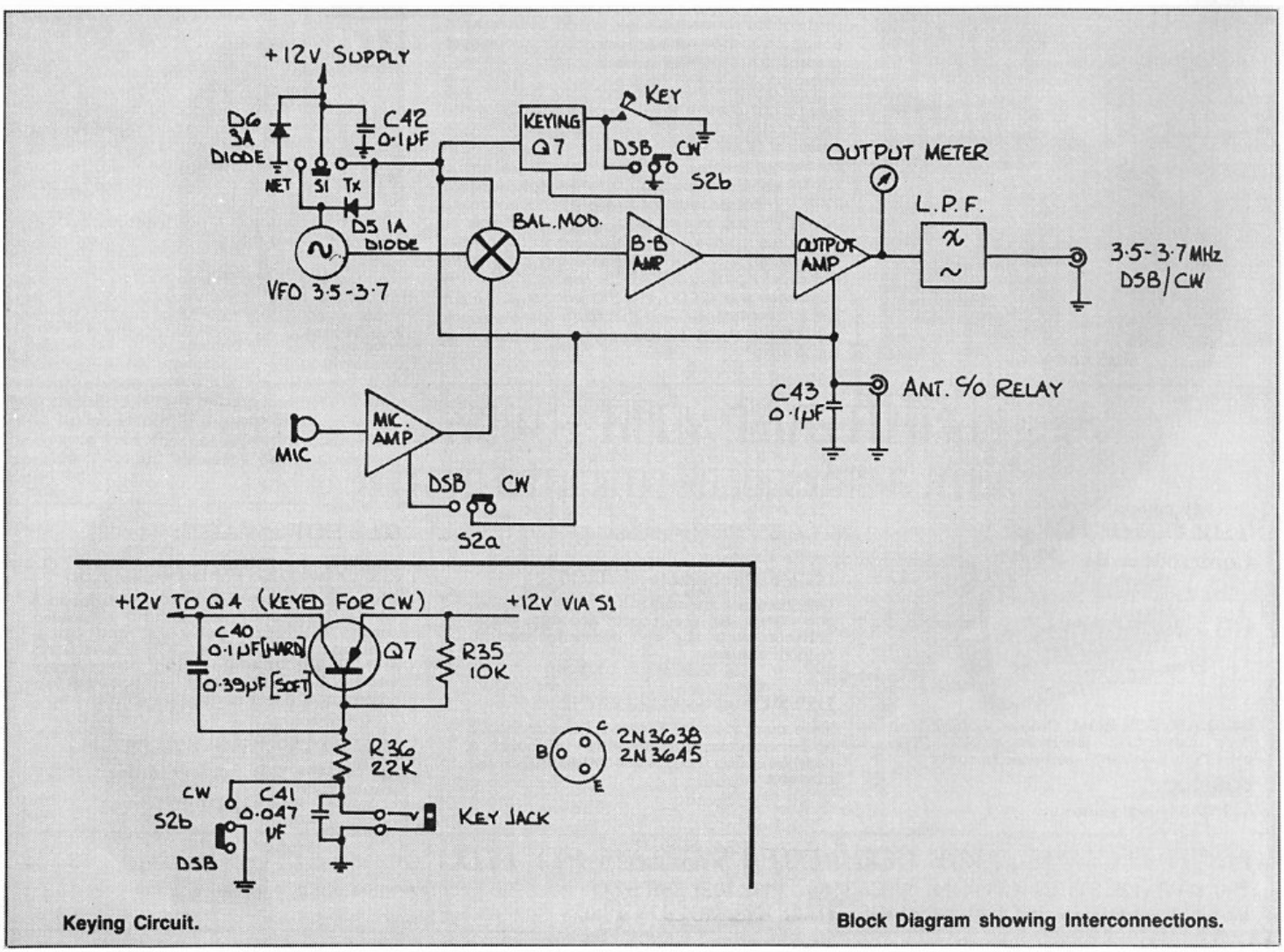
PERFORMANCE

Frequency Range:	3.5 to 3.7 MHz.
Modes:	DSB or CW.
Output Power:	1W PEP DSB, 1W rms CW.
Spectral Purity:	All harmonics at least -50dBc.
Carrier Suppression:	At least 35dB.
Frequency Stability:	Less than 50Hz/5min from cold.
Power Supply:	Nominally +12V at 300mA.

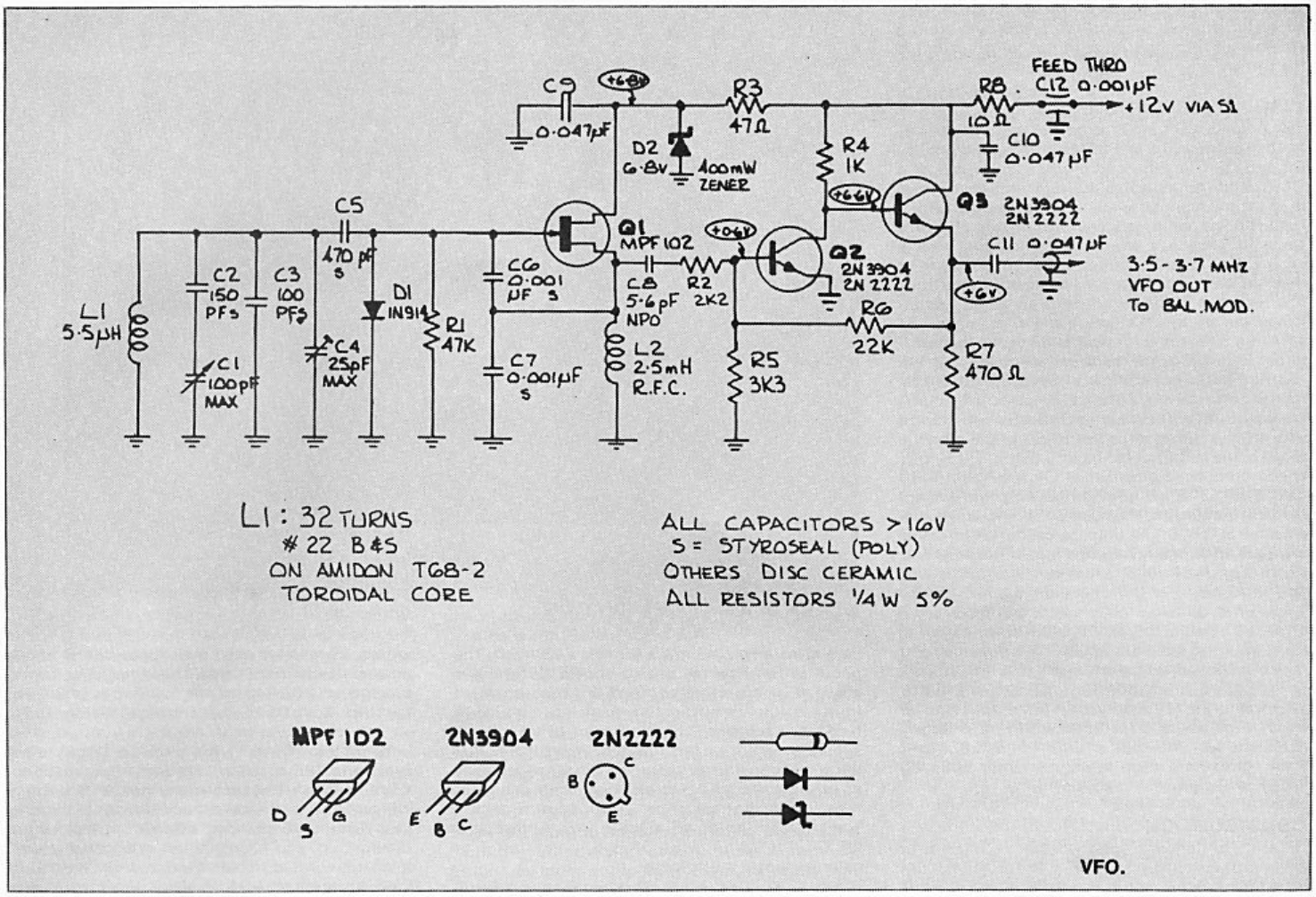
BLOCK DIAGRAM DESCRIPTION

The VFO generates the output frequency, which is adjustable from 3.5 to about 3.7MHz. This frequency is applied to the RF input port of the balanced modulator. Amplified audio energy from the microphone is applied to the AF input port differentially. For DSB operation; the balanced modulator operates in the balanced mode, and produces a DSB signal at the output port. This signal is then raised to about the 1W PEP level by a two-stage broadband amplifier. A low-pass filter is provided to attenuate any harmonics of the RF output signal.

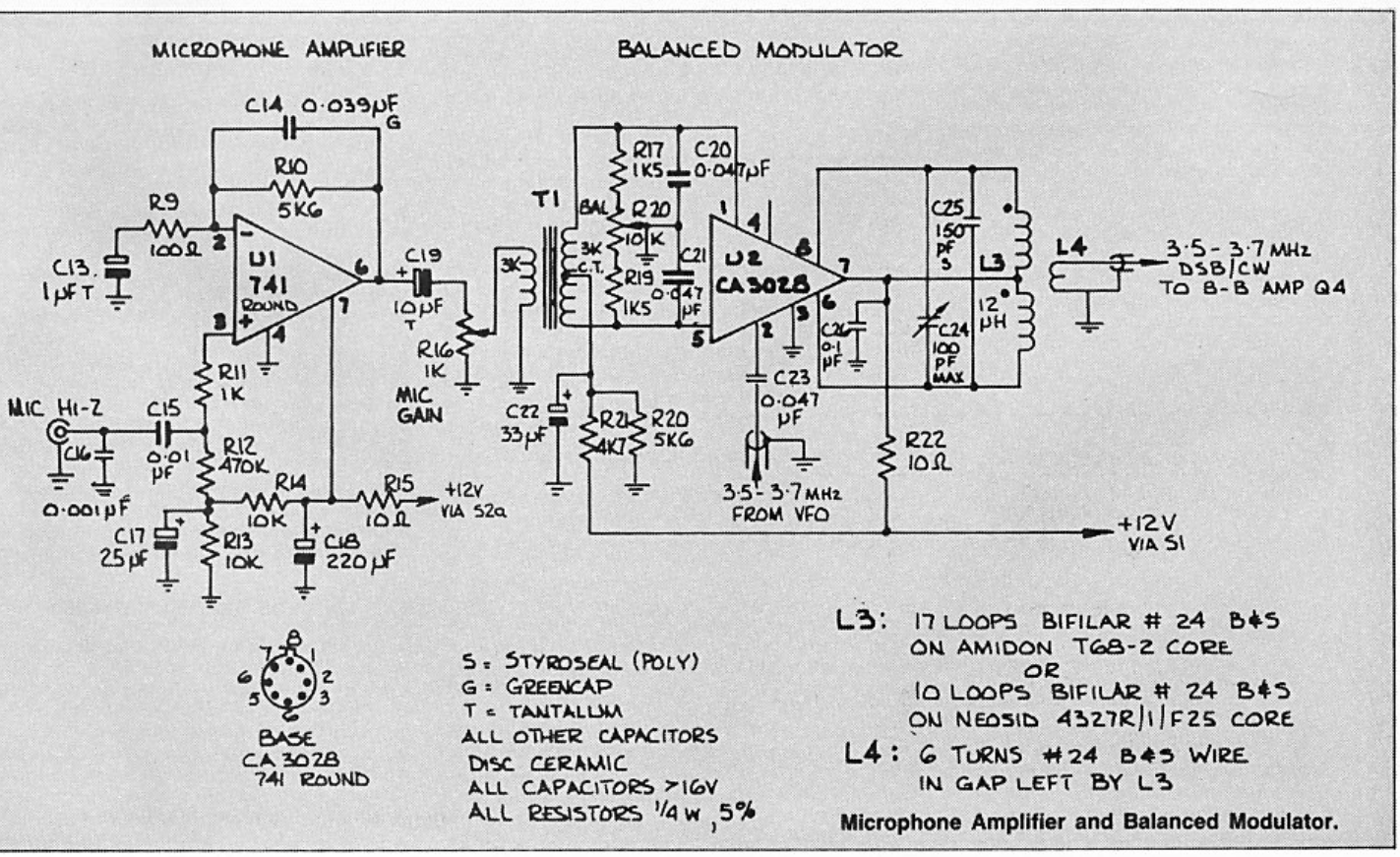
For CW operation; the balanced modulator is deliberately unbalanced to supply a carrier. Keying is obtained by interrupting the +12V supply to the first



Keying Circuit. **Block Diagram showing Interconnections.**



VFO.



Microphone Amplifier and Balanced Modulator.

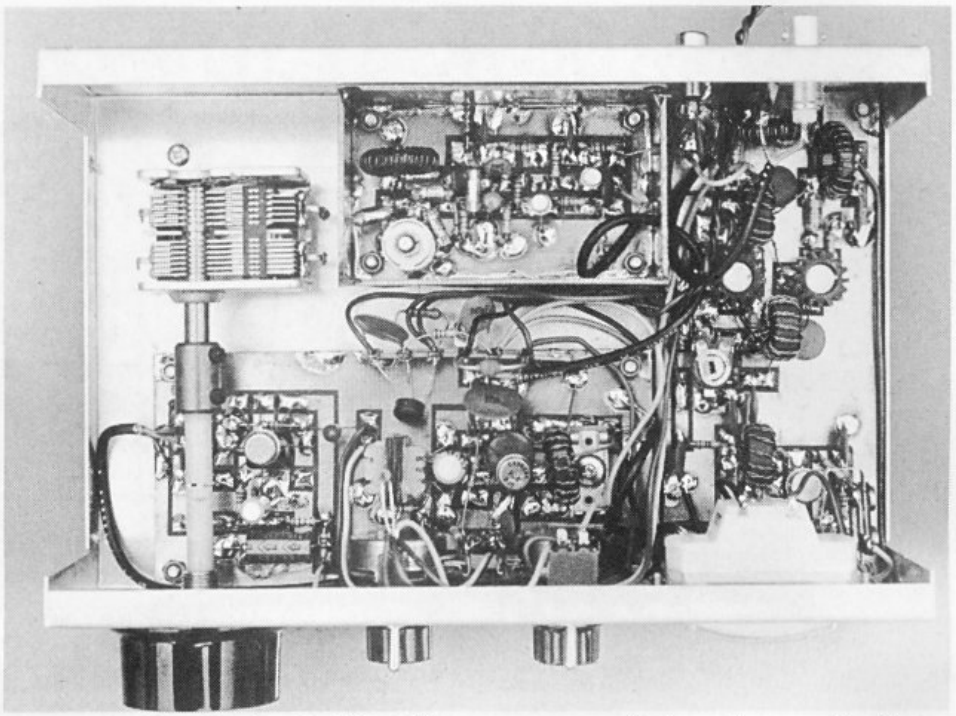
stage of the output amplifier. The AF amplifier +12V supply is removed during CW operation to prevent spurious microphonic noises from being applied to the carrier.

CIRCUIT DESCRIPTION

A Colpitts VFO at Q1 produces the chosen frequency between 3.5 and 3.7MHz, and is buffered by Q2 and Q3. The balanced modulator consists of a CA3028 differential amplifier IC. The speech signal from the microphone is amplified and shaped at U1. High and low audio frequencies are rolled off in this stage to provide a telephony type signal with a minimum of redundant frequencies. This is done so that the DSB signal occupies a minimum of spectrum. The response of the microphone amplifier is determined mainly by C13 (lows) and C14 (highs). T1 applies a differential (or push-pull) signal to the differential input of the balanced modulator at U2. "Carrier" frequency from the VFO is applied to the bal mod in common-mode at pin 2. Precise carrier null is obtained by R20. The resulting DSB signal is extracted with a bifilar tuned circuit at L3 C24 C25, which is tuned to the middle of the band; 3.6MHz. The single-ended broadband amplifier at Q4 has about 20dB gain, and the signal level is raised by this amount before it is applied to the push-pull broadband linear amplifier at Q5 Q6. This output amplifier is very stable and tolerant of poorly matched loads. The amplified signal is passed through a lowpass filter to attenuate any harmonics. For CW operation; the microphone amplifier is switched off, and the bal mod is unbalanced by adjusting R20 to allow some carrier to leak through to the B-B amplifier. This potentiometer is also used to adjust the drive level for the CW mode, so R20 has a dual function. Keying is implemented by interrupting the 12V supply to Q4 in a shaped manner by Q7. The rise and fall time for keying is largely determined by the value of C40. The value shown; 0.1uF, gives hard crisp keying. A larger value, eg 0.39uF would give softer keying.

CONSTRUCTION

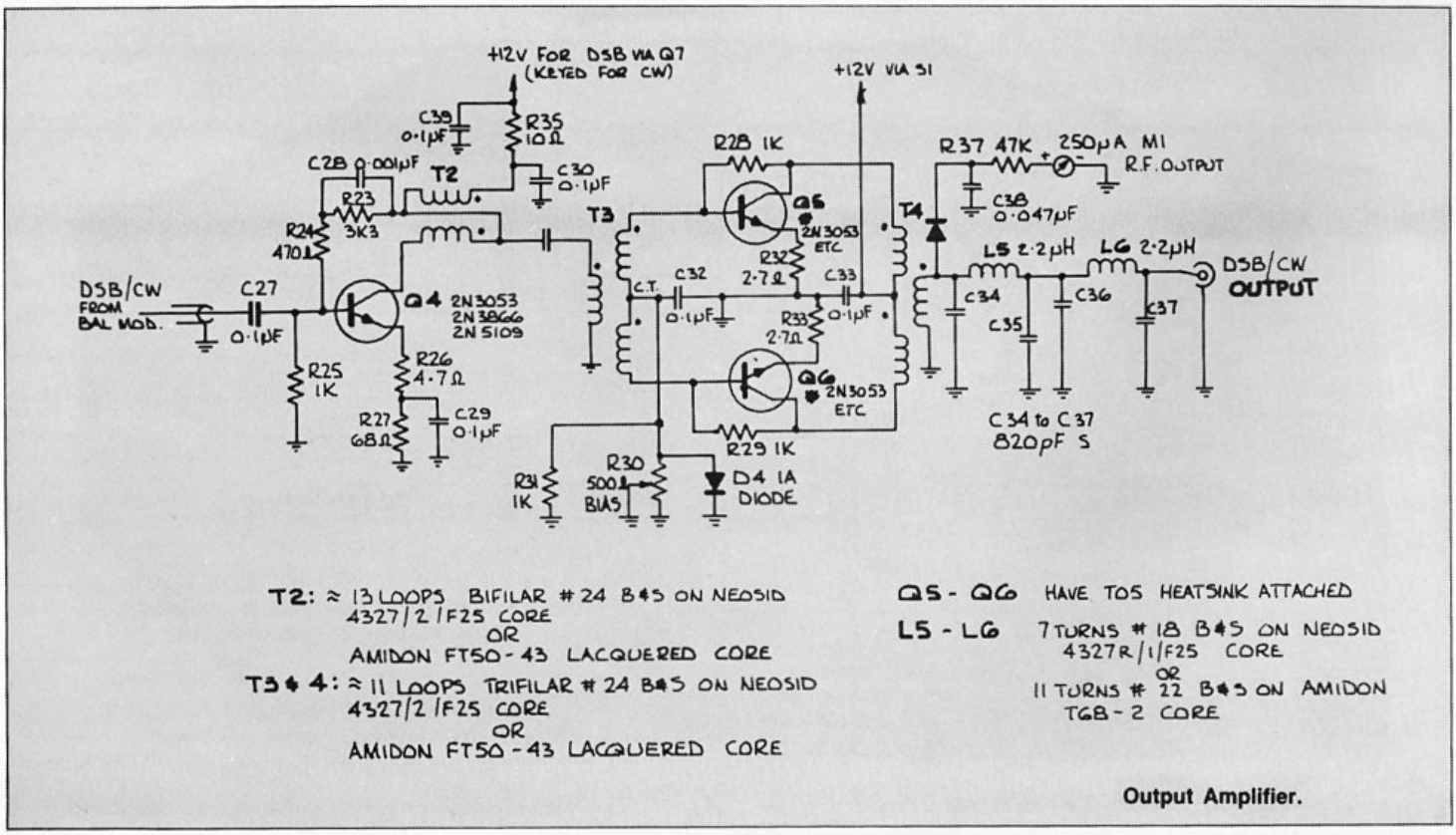
Case size depends upon whether an internal or external power supply is required. The prototype uses an external supply, and is housed in a factory-made



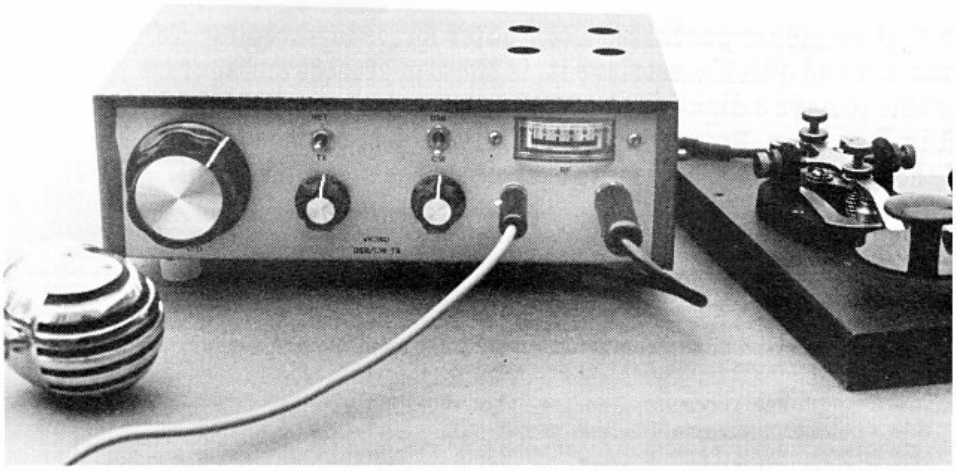
case measuring 204mmW x 65mmH x 130mmD. The photo shows how the boards should be arranged inside. It is important that the VFO is kept separated from the output amplifier to prevent leak-through or feedback problems. The placement of an internal supply is not critical but it must be remembered that the power transformer should be located as remotely as practicable from the toroidal inductors, and particularly the audio transformer T1. The cover must have some holes in the top and sides to allow ventilation of Q5 Q6. Protection diode D6 is only required if an external supply is employed.

All components except those for the keying circuit are accommodated upon the copper side of home-made printed wiring boards. The keying circuit components, and D6 C42 may be installed upon a 7-lug tag strip. Diode D5 may be soldered to the tags of S1.

To ensure VFO stability it is necessary that styroseal (poly) and NPO capacitors are used where specified. Of course, silver-mica capacitors may be used if they are available. The same applies to those in the low-pass filter (ordinary disc ceramic capacitors are rather lossy and change their value greatly with temperature, and should therefore be avoided in these applications).



Output Amplifier.



The PWB's may be mounted upon standoffs. Ideally, the VFO should be enclosed in its own little box; but the construction of such a box may be difficult for some, and the cost of die-cast boxes has become rather expensive. The photo shows the compromise reached; The PWB for the VFO has four 25 mm high walls around it as a shield. These are made of double-sided board material. Any other conducting sheet material, such as tinplate, would do. Three holes are required in the walls; one to allow connection to C1, one to admit the coaxial cable carrying the VFO signal, and another to accommodate the +12V VFO supply feedthrough capacitor, C12. VFO inductor L1 should be painted with shellac or dipped in Estapol to ensure mechanical rigidity of the windings.

Broadband transformers T3 and T4 are made as follows: Take three 300 mm lengths of 24 B&S enam wire. Lay them parallel to each other, twist them together at one end and fix that end in a vice. Draw a cloth through the wires to remove any wrinkles, then twist the other ends together and fix the group into the chuck of a hand drill. Whilst keeping the wires taut; turn the drill until there are about three twists per cm. Give the drill a pull to set the twists, then remove the group. Carefully thread them through the specified core until there are about 11 loops. It is essential that the end of one winding is connected to the start of another winding to form the centre tap (ct). Respective windings may be identified with a multimeter set to ohms. Connections should be double checked before the transformers are soldered into circuit. T2 and L3 are made in a similar way, but with two wires. Once again it is essential that the end of one winding is connected to the start of the other winding. The start of a winding is represented schematically with a dot. L3 is a bifilar wound inductor to provide a balanced load to the output of U2. If Amidon cores are used for T2-T4, they should first be coated with some kind of enamel such as Estapol or shellac to prevent losses due to scratching of the wire enamel. Neosid cores require no treatment. Choke L2 is available ready made from several sources.

The choice of dial drive for the VFO capacitor must be left to the individual constructor. Indeed, it is possible to get by without a reduction drive, and accurate netting is not difficult. If a drive is used, it should be connected to the capacitor shaft via a flexible coupler. As these also have become difficult to obtain, a short length of plastic number 3 (6.5 mm) knitting needle will do the job. Four slots may be cut at right-angles with a hack-saw to give some flexibility.

All tests and adjustments must be carried out with a dummy load connected to the output. This could consist of 2 x 100 ohm 1 W Philips cracked carbon or metal-film resistors connected in parallel and soldered to a male coax connector to suit.

ADJUSTMENT

When construction is complete, and component locations/wiring checked; bias pot R30 must first be adjusted so that the output amplifier draws a quiescent current of about 100mA. This may be done by measuring the current drawn from the 12V supply with S1 in the Tx position and S2 in the DSB position. R20 must first be adjusted as described in Operation below. As this current forms the major component, that drawn from the other parts of the transmitter may be ignored for this purpose (provided of course that no fault exists).

The VFO tuning range is adjusted as follows: With C1 set at full mesh; C4 is adjusted so that the VFO generates 3.500MHz. It should be found that when C1 is at minimum C, the frequency is about 3.7MHz. If greater range is required, C2 may be increased to the next higher value (180 or 220pF). If for some reason C4 does not bring about the required frequency as described above, C3 may be changed to correct the problem. 82pF would raise the frequency, and 180pF would lower it.

L3 is brought to resonance by unbalancing the bal mod with R20 and peaking C24 for maximum output as indicated on M1. This adjustment should be done at about mid-band (3.6MHz).

Feel the heatsinks of Q5 Q6 occasionally to make sure that they are not running too hot to touch. If they do get too hot after some minutes of keyed CW operation; reduce the quiescent bias current.

OPERATION

To operate DSB; S2 is placed in the DSB position, and the carrier bal pot R20 is adjusted for a null as indicated on M1. A more precise null can be obtained by listening to the signal on the station receiver. Whilst speaking in a normal voice; mic gain pot R16 is advanced until M1 flicks up to about 3 on a scale of 10. If an oscilloscope is available, the DSB output waveform can be viewed and R16 adjusted to the point where flat-topping just occurs then backed off slightly from that point. The signal should sound clean with a minimum of splatter when it is checked on the station receiver. The operator will have to wear headphones during this set-up to avoid audio feedback problems. Better still — have another person listen to the signal and adjust R16 to a point where maximum undistorted output is obtained.

Incidentally, AM operation is possible by inserting an appropriate level of carrier by careful adjustment of R20.

To operate CW; S2 is placed into the CW position and bal pot R20 is adjusted out of the null position to set the output level required between 0 and 1W.

CONCLUSION

Although 1W may be considered a very low level of power, it is possible to work stations far and wide, and interstate QSO's should be obtained. Later, if desired, a linear amplifier can be added as an "afterburner". Details of two amplifiers have been published, and the author can supply information on these if required.

Send a large SASE, with two stamps please, to the author for a copy of the PWB artwork, component location diagrams and a list of parts and parts sources.

Photography: Drew Diamond VK3XU

References:

Solid State Design — ARRL.
Radio Communication Handbook — RSGB
Practical RF Design Manual — DeMaw.

AR

A TELEPHONE THAT DOES WHAT IT'S TOLD

Dials and even push buttons may become a thing of the past on telephone. Instead you will simply tell them to make a call.

Such a phone has already been developed by engineers at the British Telecom (BT) research laboratories at Martlesham Heath in eastern England. It is known there as ASCOT which is short for automatic speech controlled telephone.

ASCOT looks a fairly normal telephone but has a built-in-microcomputer and a tiny display screen which displays the numbers being automatically dialled in response to voice commands spoken into the mouthpiece of a normal handset. The next step is to get rid of the handset so that users simply speak to the unit.

Up to 50 useful words such as "dial" and "home" can be stored in the telephone's computer memory. Each instrument is at present programmed to respond to the voice of a particular user but eventually the phone is expected to accept instructions from anyone. At the moment, each time it receives verbal instructions it compares the voice pattern with its computer "template" before making the call.

The phone will take over once the user has given the command "dial" followed by the wanted number. Alternatively, frequently used numbers can be stored under a name. This means, for instance, the user simply says "dial home" to get the phone to make a call automatically to his home.

The secret of the new phone is its computerised vocabulary memory which engineers have succeeded in getting into a neat table-top unit little bigger than an ordinary telephone.

BT believes ASCOT is likely to be used initially to help physically disabled people who may not be able to move an ordinary telephone dial or press buttons.

ASCOT could also become a lifesaver by enabling the disabled simply to say "emergency" to the phone, which would be programmed to respond by calling up the police, fire brigade or an ambulance.

From New Technology in Britain

AR

FEBRUARY BEST PHOTOGRAPH

In February the judges selected the group of photographs depicting the Red Cross Murray River Marathon. in the centre pages.

The winner at the end of the competition in June will win the Agfa-Gevaert prize of film and video tapes to the value of $100.

CASSETTE LOG PROGRAMME

Neil Cornish, VK2KCN
56 Sherwin Avenue, Castle Hill, NSW, 2154

High on the list of tasks that amateurs purchased a computer for, is log-keeping. To be able to store such information and quickly retrieve it, is the aim of most amateurs. To do so quickly, it is desirable to have a disk-based programme such as my DISKLOG programme printed in AR in December. Programmes that rely on tape storage tend to be too slow to be practical, however, this programme overcomes the speed problem.

```
          AMATEUR CASSETTE LOG
       DE, NEIL CORNISH - VK2KCN

          JAPAN FILE IN MEMORY

  F1 .. LOAD   LOG FILE FROM TAPE
  F3 .. SEARCH LOG FILE IN MEMORY
  F5 .. UPDATE LOG FILE IN MEMORY
  F7 .. ADD TO LOG FILE IN MEMORY
  F2 .. SAVE   LOG FILE IN MEMORY
  F4 .. START  NEW FILE FROM SCRATCH
  F6 .. QUIT   RETURN TO BASIC

 SELECT FUNCTION F1,F2,F3,F4,F5,F6,F7
```

Screen Dump of the Programme Menu.

The TAPELOG programme is designed to store references to your written log in such a way that you can find the details of a prior QSO with any other station in the first minutes of a QSO.

So that the files do not become huge and take time to load, a number of cassettes are used, each with a section of the world on file. The number of cassettes that you choose to use will vary on your operating habits. You could simply have one cassette per continent, or one cassette per ITU zone. For the more active amateur, you may need one cassette per countries, or even one cassette per call area. Probably, you will need a mixture of the above, with some countries needing to be broken up into call areas, whilst some continents (eg. South America) would not make too great a file on one cassette.

Having decided the general outline of the cassette file you wish to create, you will be facing the task of entering your current logbook(s) into the file. The programme has a special function for this task of setting up your computer log, suppose you decide that you need one cassette file for ZL. Run the programme; select the START A NEW FILE function and go through your log entering ZL callsigns and the log page number. When you have entered all the ZL calls in your log the file is SAVED on tape by the programme.

Next you enter, say, previous VK QSO's and perhaps you may need separate cassettes for each call area. This process is repeated until all the log is neatly stored on cassettes. The programme is now ready to use and as you work DX and make contact with, say, a ZL, you simply LOAD the ZL file from the ZL tape; SEARCH the file for the log page of any prior QSO and then UPDATE the file if the prior QSO is found or ADD to the file if this is the first QSO.

As you can see, a written log is still required, but the restriction of the tape files is paramount and thus the files are kept as brief as possible. The programme is written for the Commodore 64 and allows 500 callsigns per cassette file. More will fit in the 64, but the tape takes longer to read. Splitting your log up as described above will give the SEARCH part of the programme its great advantage . . . SPEED.

For the past active amateur, there is a lot of typing ahead, so, as usual if you would rather use it than type it, $5 for a tape to the author will get one for you. A highly abridged version for the unexpanded VIC-20 (max 250 calls per cassette) is also available from the same source.

AR

```
1000 REM{ TAPELOG      20.09.84   V01G    DE, NEIL CORNISH  VK2KCN }
1010 GOSUB2120:GOSUB2030
1020 GOSUB1970
1030 ONYGOTO1040,1120,1220,1350,1440,1520,1630
1040 REM{  LOAD    LOG FILE FROM TAPE  }
1050 GOSUB1730:GOSUB1930:GOSUB1900:IFY$<>"Y"THEN1020
1060 R=8:C=4:GOSUB1700:R=8:GOSUB1950:PRINTR$(R);C$(C);
1070 PRINT"■ ENTER THE NAME FOR THIS FILE ■■":INPUTFI$
1080 GOSUB1950:PRINTR$(R);"■ LOADING "FI$" FILE":I=1:OPEN1
1090 INPUT#1,Q$(I),P(I)
1100 IFQ$(I)="*"THENCLOSE1:I=I-1:GOSUB1870:GOSUB1800:GOTO1020
1110 I=I+1:GOTO1090
1120 REM{  SEARCH LOG FILE IN MEMORY  }
1130 IFITHEN1150
1140 GOTO1460
1150 GOSUB1730:IFASC(FI$)=32THENGOSUB1950:FORK=1TO3:GOSUB1870:NEXTK:GOSUB1020
1160 R=8:PRINTR$(R);C$(C);"■ ENTER CALLSIGN AND HIT [RETURN] ":PRINT
1170 INPUTCA$:R=8:GOSUB1950:PRINTR$(R);C$(C);"■ CHECKING LOG FOR QSO WITH "CA$
1180 FORF=1TOI:IFCA$<>Q$(F)THENNEXTF:GOTO1210
1190 R=8:GOSUB1950:GOSUB1870:PRINTR$(R):C$(C);"■ QSO WITH "CA$" LOG PAGE "P(F)
1200 GOSUB1850:GOSUB1900:GOTO1020
1210 R=8:GOSUB1950:GOSUB1870:PRINTR$(R);C$(9);"■ FIRST QSO WITH "CA$" ":GOTO1200
1220 REM{  UPDATE LOG FILE IN MEMORY  }
1230 IFITHEN1250
1240 GOTO1460
1250 GOSUB1730:R=8:GOSUB1950:GOSUB1870
1260 PRINTR$(R);C$(2);"■ WARNING -- ONLY USE THIS FUNCTION  "
1270 PRINTC$(2);"■             AFTER A SUCESSFUL SEARCH ":PRINTC$(2);
1280 PRINT"■Y■ TO CONTINUE OR ANY OTHER TO ABORT":GOSUB1900
1290 IFY$<>"Y"THEN1020
1300 R=8:GOSUB1950:PRINTR$(R);C$(1);" RE-ENTER LOG PAGE CURRENT QSO WITH..."
1310 PRINTC$(17)CA$:PRINT:INPUTP(F)
1320 R=6:GOSUB1950:PRINTR$(R);C$(12)"■ FILE UPDATED! "
1330 PRINTR$(6);"DON'T FORGET TO SAVE THE FILE ON TAPE--"
1340 GOSUB1850:GOSUB1900:GOTO1020
1350 REM{  ADD TO LOG FILE IN MEMORY  }
1360 IFITHEN1380
1370 GOTO1460
1380 GOSUB1730:R=8:GOSUB1950:GOSUB1870
1390 PRINTR$(R);C$(2);"■ WARNING --- ONLY USE THIS FUNCTION  "
1400 PRINTC$(2);"■          AFTER AN UN-SUCESSFUL SEARCH ":PRINTC$(2);
1410 PRINT"■Y■ TO CONTINUE OR ANY OTHER TO ABORT":GOSUB1900:IFY$<>"Y"THEN1020
1420 R=8:GOSUB1950:PRINTR$(R);C$(2);"■ ENTER LOG PAGE # FOR THIS QSO WITH "
1430 PRINT:PRINTC$(17);CA$:I=I+1:INPUTP(I):Q$(I)=CA$:GOTO1320
1440 REM{  SAVE    LOG FILE IN MEMORY  }
1450 IFITHEN1480
1460 R=4:C=4:GOSUB1950:GOSUB1800
1470 GOSUB1870:GOSUB1850:GOSUB1900:GOTO1020
1480 GOSUB1730:GOSUB1930:GOSUB1900:IFY$<>"Y"THEN1020
1490 R=8:GOSUB1950:PRINTR$(R);C$(C);"■ ENTER THE NAME FOR THIS FILE ■"
1500 R=10:PRINTR$(R)
1510 INPUTFI$:GOSUB1750:GOTO1020
1520 REM  START NEW FILE FROM SCRATCH }
1530 GOSUB1730:R=8:GOSUB1950:PRINTR$(R);C$(C);"■ ENTER THE NAME FOR THIS FILE "
1540 PRINT:INPUTFI$:R=4:GOSUB1950:GOSUB1800:I=1
1550 C=0:R=6:PRINTR$(R);C$(C);" ENTER EACH CALLSIGN FOLLOWED BY IT'S"
1560 PRINTC$(C);" PAGE NUMBER IN YOUR LOG, SEPARATED BY"
1570 PRINTR$(8);C$(C);" A COMMA - THEN PRESS [RETURN]
1580 R=11:PRINTR$(R);C$(C);" AFTER THE LAST ENTRY, TYPE *,0 [RETURN]":PRINT
1590 INPUTQ$(I),P(I):R=13:GOSUB1950:IFQ$(I)<>"*"THENI=I+1:GOTO1580
1600 C=4:R=6:GOSUB1950:PRINTR$(R);C$(C);"■ WRITING LOG ON TAPE ":R=10:GOSUB1930
1610 GOSUB1900:IFY$<>"Y"THEN1550
1620 GOSUB1750:GOTO1020
1630 REM{  RETURN TO BASIC  }
1640 GOSUB1730:GOSUB1930:GOSUB1900:IFY$<>"Y"THEN1020
```

```
1650 GOSUB1950:GOSUB1870:PRINTR$(R);C$(C);"■ HAVE YOU SAVED THE LOG FILE?  Y/N "
1660 GOSUB1900:IFY$<>"Y"THEN1020
1670 END
1680 REM■                SUB ROUTINES                ■
1690 :
1700 REM■   INSERT CORRECT TAPE S/ROUTINE   ■
1710 PRINTR$(R);C$(9);"■ INSERT CORRECT TAPE ":GOSUB1850:GOSUB1900
1720 GOSUB1830:GOSUB1900:RETURN
1730 REM■   CLR PRT SCREEN DISPLAY FUNCTION S/ROUTINE   ■
1740 R=6:GOSUB1950:PRINTR$(R);C$(C);5$(Y):RETURN
1750 REM■   WRITE FILE TO TAPE S/ROUTINE   ■
1760 C=4:R=6:GOSUB1950:GOSUB1830:GOSUB1900:GOSUB1950:PRINTR$(R);C$(C);
1770 O$(I+1)="■":FORN=1TO2:OPEN1,1,1,FI$
1780 FORT=1TOI+1:PRINT#1,O$(T);","P(T)","CR$:NEXTT
1790 CLOSE1:NEXTN:RETURN
1800 REM■   STATUS LINE S/ROUTINE   ■
1810 SL$=FI$+" FILE IN MEMORY":PRINTR$(4);B$
1820 C=INT(40-LEN(SL$))/2:PRINTR$(4);C$(C);SL$:C=4:RETURN
1830 REM■   REWIND TAPE S/ROUTINE   ■
1840 PRINTR$(6);C$(9);"■    REWIND THE TAPE    ":GOSUB1850:GOSUB1870:R=R-2:RETURN
1850 REM■   PRESS ANY KEY S/ROUTINE   ■
1860 PRINTR$(10);C$(6);" PRESS ANY KEY TO CONTINUE!":RETURN
1870 REM■   TURN TO FORT S/ROUTINE   ■
1880 POKE5D+24,15:POKE5D+6,240:POKE5D+5,12:POKE5D+1,20:POKE5D+2,1
1890 POKE5D+4,65:FORT=1TO500:NEXT:POKE5D+4,64:RETURN
1900 REM■   GET Y$ & RETURN S/ROUTINE   ■
1910 GETY$:IFY$=""THEN1910
1920 RETURN
1930 REM■   ARE YOU SURE ? S/ROUTINE   ■
1940 R=R+2:PRINTR$(R);C$(9);"■ ARE YOU SURE ?  Y/N ■":RETURN
1950 REM■   CLR PRT SCREEN S/ROUTINE   ■
1960 FORT=RTO23:PRINTR$(T);B$:NEXTT:RETURN
1970 REM■   MAIN MENU S/ROUTINE   ■
1980 R=4:GOSUB1950:GOSUB1800
1990 FORT=1TO7:PRINTR$(T+5);C$(4);5$(T):NEXTT
2000 PRINTC$(3);"■SELECT ■FUNCTION■ F1,F2,F3,F4,F5,F6,F7":C=4
2010 GOSUB1900:Y=ASC(Y$)-132:IFY<1ORY>7THENGOSUB1870:GOTO2010
2020 RETURN
2030 REM■   START UP S/ROUTINE   ■
2040 DIM0$(500),P(500):CR$=CHR$(13):5D=54272:POKE53280,3:POKE53281,3
2050 PRINT"■■          AMATEUR CASSETTE LOG          ":FI$=" THERE IS NO"
2060 PRINT"■■       DE, NEIL CORNISH - VK2KCN        ":FORT=1TO7:READ5$(T)
2070 NEXTT:RETURN
2080 DATAF1 .. LOAD   LOG FILE FROM TAPE,F3 .. SEARCH LOG FILE IN MEMORY
2090 DATAF5 .. UPDATE LOG FILE IN MEMORY,F7 .. ADD TO LOG FILE IN MEMORY
2100 DATAF2 .. SAVE   LOG FILE IN MEMORY,F4 .. START  NEW FILE FROM SCRATCH
2110 DATAF6 .. QUIT   RETURN TO BASIC
2120 REM■   SCREEN CONTROL S/ROUTINE   ■
2130 DIMC$(25),R$(25):B$="■                                        "
2140 R$="■■■■■■■■■■■■■■■■■■■■■■■■■":FORT=1TO25:R$(T)=LEFT$(R$,T):NEXTT
2150 C$="■■■■■■■■■■■■■■■■■■■■■■■■■":FORT=1TO25:C$(T)=LEFT$(C$,T):NEXTT:RETURN
```

AMATEUR RADIO OPERATORS IN THE USA AGREE ON PACKET-RADIO PROTOCOL

The Board of Directors of the American Radio Relay League (ARRL), Newington, Connecticut on 26 October, 1984 approved a standard protocol for amateur packet radio. A document with detailed specifications, *AX25 Amateur Packet-Radio Link-Layer Protocol*, by Terry Fox, is available from ARRL Headquarters for $8.00 US, $9.00 Canada and elsewhere.

This protocol was developed over a three-year period by amateur volunteers and amateur packet-radio clubs throughout North America. Earlier versions of the protocol have been in daily use since early 1983 by the approximately 2000 amateur packet-radio stations. Many of these are in populous areas of the US, such as San Francisco, Boston, Miami, and Washington, DC, and others are active in Europe, Africa, East Asia, Australia and New Zealand. Amateur packet-radio enthusiasts ("packeteers") have a wide choice of transmission modes: high-frequency ionspheric, very-high-frequency terrestrial, amateur satellite, and meteor-scatter communications. Transmission speeds are now in the 300 to 1200 word-per-minute range and will be much higher in the near future as new equipment designs are completed.

Although it is early in the development of amateur packet radio, it will eventually become an international integrated network offering a wide variety of data communications services to amateur radio operations. It will be capable of providing the public with emergency communications in times of disaster as amateurs have done for many years by manual message processing. Other network services will be automatic weather reporting, data bases, still photographs, and compressed-bandwidth television.

AR

THUMBNAIL SKETCHES

Alan Shawsmith, VK4SS
35 Whynot Street, West End, Qld 4101

HARRY S DEARNESS VK4KW

Harry S Dearness convinced the PMG he should be allowed to go on air by attaining his AOCP in Mackay, Queensland in May 1939. Unfortunately, as Australia's participation in WWII began in September 1939, like so many others, Harry just got started when he had to 'pull the big switch'; a most frustrating move for those at the height of their enthusiasm.

Again, like so many others, VK4KW enlisted and saw service with the 2/122 Aust Brigade AIF 9th Division 1941-1946.

The war over, Harry continued professionally with electronics as a Radio and TV technician until his recent retirement to the near coastal town of Strathpine, thirty kilometres north of Brisbane.

As an amateur he has remained most active, participating in almost all aspects and activities, one of the latter being JOTA. An all moder, after a period of homebrewing, he now uses Yaesu gear to good effect in DX and contests. A visit to the shack of VK4RM was the catalyst to his interests in AR.

Harry VK4KW lists his other hobby as gardening — which, combined with amateur radio, seems to this writer an ideal way to spend one's later years.

AR

HARRY (TIBBY) SCHOLZ VK4HR (SK)

VK4HR was yet another unforgettable character of AR's halcyon days. He was first licensed in Gladstone in 1933 and shortly after moved to Brisbane where he soon made his mark on the local scene.

Harry participated with much success in all levels of the hobby, viz administration, technical and social. He served on the WIA Council in VK4 in more than one capacity; a homebrewer of ability, he constructed both his amateur and broadcast band gear and he was the creator of the very active South Brisbane Radio Club. His DX achievements were legion and many trophies graced his shack.

VK4HR was a good socializer and popular but he possessed a sharp and sometimes cutting wit and the urge to instigate practical jokes. May I relate just one of many — *'Tibby' VK4HR and yours truly worked together for a period as PMG Broadcast Technicians. Another amateur workmate, who shall remain nameless, habitually wore the most outrageous ties to work — vulgar by any standards. 'Tibby's' incisive comments about this enraged him.*

"Aw, cut it!" said the nameless amateur heatedly, unable to stand the jibes any longer.

It so happened that VK4HR was standing at a workbench with a large pair of scissors in his hand. "You said 'Cut it'," inquired 'Tibby'.

"Yes," said the amateur, "I meant it!"

Whereupon, VK4HR simply reached up and cut off the offending necktie at the knot. What followed is not for the print media.

How Harry VK4HR came by his nickname is not known. It could be related to his lack of 'tibia' (shin bone) length. He was slightly shorter than average.

Sadly, post-WWII he fell ill and prematurely went into a long physical decline; his wit, however, remained with him to the end. AR is much the poorer for his passing.

AR

Vicki Marsden VK2EVM
Mid Western Highway, Blayney, NSW 2799

HOW TO CONVERT COMMODORE SYMBOLS FOR USE ON OTHER COMPUTERS

Have you ever seen a programme that will do just what you always needed only to discover that it was written for the Commodore 64 with all those odd looking symbols that you can't make head or tail of?

So to help in converting C-64 programmes to other micro computers, here are some commonly used symbols, POKEs and other commands for the '64 that must be changed or disused on other computers.

USED IN A PRINT STATEMENT

CLEAR SCREEN — HOME - TOP LEFT CORNER OF SCREEN
CURSOR UP — CURSOR DOWN — CURSOR LEFT
CURSOR RIGHT

REVERSE ON - PRINTS WHITE ON BLACK
REVERSE OFF - PRINTS BLACK ON WHITE

INSERT — DELETE

BLACK	WHITE	RED	CYAN
PURPLE	GREEN	BLUE	YELLOW
ORANGE	BROWN	LT RED	DK GREY
MID GREY	LT GREEN	LT BLUE	LT GREY

THESE ARE MOST LIKELY TO BE USED WITH AN IF STATEMENT

F1 KEY	F2 KEY	F3 KEY	F4 KEY
F5 KEY	F6 KEY	F7 KEY	F8 KEY

EACH COLOR ALSO HAS A NUMBER STARTING FROM 0 (BLACK), 1 (WHITE)
ETC IN THE ABOVE ORDER.

POKE 53281,X CHANGES THE INNER SCREEN COLOR.
POKE 53280,X CHANGES THE OUTER SCREEN COLOR.

ANY VALUES POKED BETWEEN 54272 AND 54296 CONTROL THE
THREE VOICES IN THE C-64.
EG. POKE 54296,X CONTROLS THE VOLUME. X MAY BE FROM 0 (OFF) TO 15 (LOUDEST).

EVERY PERIFERAL CONNECTED TO THE COMPUTER HAS ITS OWN DEVICE NUMBER.

1 - CASSETTE 2 - MODEM 3 - SCREEN 4 - PRINTER 5 - 2ND PRINTER
8 - 1ST DISK DRIVE 9,10,11 - ADDITIONAL DISK DRIVES

OPEN 2,4 WOULD OPEN FILE NO. 2 TO THE PRINTER.
PRINT#2,A$ WOULD PRINT A$ ON THE PRINTER.

OPEN 3,8,3,"0:15/12/84,S,R" MEANS ...
OPEN FILE#,DEVICE#,CHANNEL#,"0:FILE NAME,FILE TYPE, DIRECTION"
FILE TYPE IS S FOR SEQUENTIAL.
DIRECTION IS R FOR READ OR W FOR WRITE.

INFORMATION IS READ BY INPUT#3,A$ (OR GET#3,A$ FOR A SINGLE CHARACTER)
OR WRITTEN TO DISK BY PRINT#3,A$

OPEN15,8,15 OPENS THE DISK COMMAND CHANNEL.

INPUT#15,E1$,E2$,E3$,E4$ READS THE DISK ERROR CHANNEL.

E1$ - ERROR NO. E2$ - ERROR NAME E3$ - TRACK NO. E4$ - BLOCK NO.

PRINT#15,"N0:NAME,ID" - REFORMATS THE ENTIRE DISK.
PRINT#15,"C0:NEWFILE=0:OLDFILE" - COPIES A PROGRAM ON THE DISK.
PRINT#15,"R0:NEWNAME=OLDNAME" - RENAMES A FILE.
PRINT#15,"S0:NAME" - ERASE (SCRATCH) A FILE.
PRINT#15,"I" - INITIALIZE.
RETURNS THE DISK TO THE SAME STATE AS WHAEN POWERED UP.
PRINT#15,"V" - VALIDATE.
REORGANIZES DISK TO ENSURE THAT AVAILABLE BLOCKS ARE FREE.

THE @ IN SAVE"@0:XXXXX",8 MEANS THAT THE FILE XXXXX IS TO BE SAVED
OVER THE EXISTING FILE XXXXX

LOCATIONS 1024 TO 2023 ARE SCREEN POSITIONS.
EG. POKE1024,1 WOULD PUT THE LETTER A IN THE TOP LEFT CORNER OF THE SCREEN.

A - Z ARE NUMBERED 1 - 26.
32 TO 63 ARE THE SAME AS THE ASCII/CHR$ CODE.
NUMBERS ABOVE 63 ARE THE SYMBOLS DISPLAYED ON THE C-64 KEYBOARD.

LOCATIONS 55296 TO 56295 CONTROL THE COLOUR OF THE SCREEN POSITION.
EG. POKE55296,1 WOULD CHANGE THE COLOR OF THE LETTER A TO WHITE.

SO YOU'VE BOUGHT A PERSONAL COMPUTER?

Bill Martin VK2COP
33 Somerville Road, Hornsby Heights, NSW 2077

Well, so have I . . . and of course, the first thing you find out is that you're not as smart as you thought you were. Many months of agonising over *which* PC to buy, *what* I wanted it to do for me, what *I* wanted to do to it, and whether the PC and I could come to some arrangement, suitable to both of us. Well, the computer has come to some arrangement alright — it does what it wants to do, when it wants to do it! But, let me say this in my defence; I have learnt a few things about it — let me enumerate them;

I have learnt what a Syntax error is; an illegal variable error; and unpaired bracket error; a multiple statement; a nothing to exec; a mixed mode; a next without for error; an unknown function (?); a bad load (this is a cardinal sin); a can't continue; a gosub stack error, but have not yet received the 'Option Not Fitted' error message.

Not bad, eh? So you can see I've learnt quite a few things about it. (I hope it's not listening at the moment.) I've learnt what 'Hardware' is; I've learnt what 'Software' is; I've learnt all sorts of computer nomenclature and the only thing left to learn about it is **HOW TO OPERATE THE BLASTED THING!**

And I must put a 'pot' across the speaker to wind down the audio on the speaker a little. A couple of times, when I've really been concentrating on serious programming, the rotten thing has BEEPED at me, causing me to nearly fall off the chair! Actually, even today, I took the thing to pieces to do just that, and must admit I was tempted to leave it in pieces, so it couldn't insult me any further! Anyway, there I was, with the covers off, and still no evidence of the speaker, or it's connections. Not being a person who is easily daunted, (I am the holder of the AOCP), I continued with the screwdriver, and removed the top board . . . HORRORS! The speaker is under the 'Mother board'.

Consider, for a moment, the situation . . . here I am, with the computer in complete disarray on the bench; my brain working overtime to try and keep up with what I'm trying to do; a top board full of IC's shaking in my trembing hands, AND STILL CAN'T GET AT THE SPEAKER.

By this time, you're probably thinking *"Well, he's outsmarted himself this time."* Not so . . . I have exigency plans for just this type of situation: I simply put every bit back together, and attack on a future occasion, when I have had time to think about it.

And that is exactly what the situation is at the moment. As a matter of fact, when I come to think about it, the audio level of the speaker is not so bad — I think I could learn to live with it, in time . . . But the BITS, BYTES, POKES, PEEKS, PIXELS, et al, I think (on reflection) may just prove too much for me. However, my address is in the call-book, and I am always open to advice and suggestions from those who have more of a flair in these matters than I do.

On the plus side, (in case you thought I had been regretting the purchase of the PC), my children think it's marvellous, with it's games, etc. And it looks good in the shack — impresses the itinerant visitor; dresses up the decor; and leaves friends with the impression that *"he must be smarter than I thought"*. As is my wont, I don't relieve them of their erroneous ideas — I simply blind them with computer double-talk and leave them thinking that I am some sort of electronic high-brow. (HI HI). If only they knew — Of course, anyone who knows me won't be fooled. They all realise my capabilities, as I do (SIGH).

IN CONCLUSION: (As they say in the equipment reviews), I would certainly recommend the purchase of a personal computer for the average amateur, and, everything else aside, it is a good companion when the solar cycle is at the bottom of the graph. In short, you have HF, SSB, CW, VHF possibly, and NOW — computership, glass RTTY, Keyboard CW, and all sorts of goodies.

Buy a computer, by all means, just don't ask me what brand to buy, or how to operate it!

AR

DOC WARNS ABOUT ILLEGAL LINEARS

An investigation had found that a number of taxis in the Sydney area had been installed with linear amplifiers in an effort to increase the range of their radio and as a result get more jobs.

A DOC spokesman said use of linear amplifiers by some Sydney taxis caused interference to other radio communications services, harmed radio frequency management, and made taxi drivers liable to prosecution.

The problem had first arisen about two years ago, but reports of interference had increased significantly over the past six months.

DOC had warned it would crack down if the amplifiers were not voluntarily withdrawn.

Unauthorised use of a linear amplifier is illegal under the Wireless Telegraphy Act 1905 and operators can face penalties including confiscation of equipment and a fine of up to $1,000.

Fines would increase to $10,000 under the new Radiocommunications Act which will take effect this year. Under this Act it will also be illegal to install such equipment without authorisation.

Contributed by Jim Linton VK3PC

AR

MORE ON MURPHY

I have always been curious to know just how it came about that Murphy got lumbered as the poor fellow responsible for all the snags that seem to be an intrinsic part of electronics.

Readers may remember, that in an earlier column, I described how a social misfit named MUR-FE, deported from the land of the Pharaohs of Egypt, finally found his way to the 'Land of the Shamrocks'. Finding the Emerald Isle very much to his liking, he set about this favourite pastimes of procreating, imbibing and spoiling others fun. It is claimed that all those going under the name of Murphy are descendants of this particular Arab.

Now, by another stroke of luck, I have come across the activities of one of his twentieth century descendants. Christened Michael Meehan Murphy, born into the modern era of Science and Technology and claiming to be an electronics engineer, he developed one of the most profound concepts of this new age — MURPHY'S LAW. His real contribution to S&T lay not merely in its discovery but in its universality, application and impact. The law itself is inherently simple but it will form the foundation on which future engineers will build.

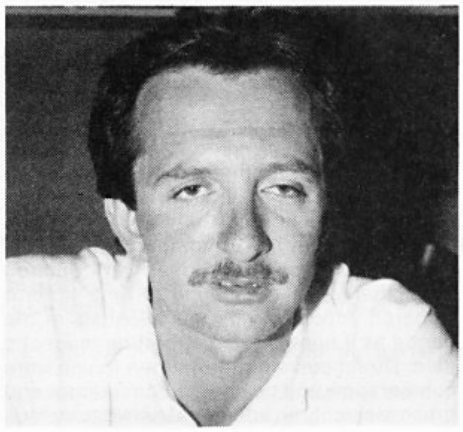
In short the law says: "If anything can go wrong, it will".

Michael Meehan Murphy has provided endless examples of the universality of Murphy's Law.

Unfortunately, Mr Murphy fell victim to his own law. He overlooked the fact it applies to *all* things — and not solely to inanimate objects. While avidly courting a lady to whom he had no intention of honorably pledging his troth, she informed him one day there was to be an heir to his hard-won estate. The photo of Mr Murphy was taken just after he received the news. His expression reminds this author of the fellow who read the following in his local village rag —

"Would the young gentleman with moustache and thinning hair, who met the small blonde lady in Brighton last year, please contact her . . . he will hear something that will wipe the smile from his face!"

AR



MURPHY

Beware the fate of Harry Steed,
— was warned, but wouldn't heed;
That Murphy does his nasty best,
Just before a big contest
He's out, a-spoiling bent
Sabotaging some event —
Or messing up the beam, or gear.
So have a thought and a fear
Touch naught that has no need —
Lest you wind up like Harry Steed,
Who spent the week-end on repair
But never did get back on air.

Alan Shawsmith
VK4SS

AR

"FORGOTTEN GENIUS"

By G. Mowat, ZS5KL

History praises such pioneers as Marconi, Edison, Graham Bell to name a few, but one man, Nikolas Tesla often unknown and delegated to the back pages of scientific journals, is responsible for a gigantic measure of scientific and industrial progress that has taken place during the past eighty years.

In the words of Tesla's biographer, John O'Neill, this is the man who gave us the twentieth century. This truly remarkable genius invented or described in detail alternating current, the modern AC induction motor, the electron microscope, the turbine, a system of arc lighting, neon and fluorescent lighting, radar forty years before it was "invented", high frequency currents that are in universal use in the medical and industrial fields, remote control by radio, harnessed the mighty power of Niagara falls, produced huge artificial lightning bolts, described the laser sixty years before it became a reality. He also lit 200 electric lights at a distance of twenty five miles WITHOUT connecting wires and in 1898, demonstrated the working principles of wireless and described in detail the radio controlled rocket forty five years before the Germans used it in World War 2.

Tesla rejected the Nobel Prize, not from vanity, but because he would have shared it with Edison who, much to his later regret, had spurned alternating current and belittled Tesla's work in this new sphere. Living in poverty, Tesla tore up a contract worth many millions of dollars because it would have caused heavy financial loss to a friend.

Tesla died in 1943, alone and in poverty in a seedy hotel room in New York, ignored and swindled by the twentieth century world he helped create.

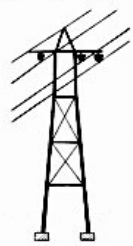
A strange, lonely man who never married, Nikolas Tesla was born in 1856 in the town of Smiljan, Austria Hungary (now Yugoslavia). He choose electricity as a career and attended the University of Prague. After graduation he secured employment as a draughtsman in Budapest and later moved to Paris where he worked as a telephone engineer. It was at this time Tesla worked out his idea of an induction motor that ran off alternating current, hitherto declared impossible by the scientists of the period as it necessitated a rotating magnetic field. Direct current motors then in use were cumbersome and heavy, the commutator and brush assembly an additional drawback which required frequent cleaning and replacement as they used a form of soft carbon. Tesla constructed his first AC motor in 1883 which he immediately patented.

In 1884 he emigrated to the United States where he shrewdly realised all future, major electrical development would take place.

After landing in New York, Tesla through a letter of introduction, secured employment with Edison. Their characters were in direct contrast with each other and inevitably, friction developed. Thomas Edison was dedicated to his direct current system and refused even to consider the alternative AC method. Tesla realised the severe limitations of the DC network with a generating station in each precinct. Power distribution outside a relatively small area being impossible without voltage loss and heavy, cumbersome power lines.

In 1887 Tesla parted company with Edison and for a period worked as a ditch digger before opening a very modest workshop which he named, The Tesla Electrical Company. It was here, although hamstrung by very limited finances, he produced many improved motors working on single, two and three phase AC systems. At this time Tesla was contacted by George Westinghouse of the Westinghouse Electric Company who offered to purchase the existing AC patents for a million dollars, plus royalties of one dollar per horsepower of future generating potential. Tesla accepted the offer and the foundations of a giant nationwide electrical network were laid. A firm friendship sprung up between the two men in direct contrast to those which existed between Tesla and Edison.

In 1893 the huge World Exposition in Chicago was illuminated by alternating current and Westinghouse secured the contract for development of the Niagara Falls power system. It was not that the full implications of the Tesla contract was realised by attorneys acting for George Westinghouse. They pointed out that the dollar/horsepower clause was not feasible when huge power systems were constructed. It was impractical and would bankrupt the Westinghouse company. Reluctantly Westinghouse explained the predicament to Tesla who immediately tore up the contract, thereby giving up claims to many millions of dollars of future income.



Nevertheless, Tesla threw himself into new development work and produced many inventions, especially in the high frequency current fields. He unfortunately failed to file patents for these, much to his everlasting regret and in later years these same developments were blatantly pirated around the world. Even the famous Tesla HF coil was not protected by patents.

After discovering "terrestial stationary waves", Tesla's burning ambition was the transmission of power without wires and the broadcasting of intelligence by wireless waves, culminating in a world wide power and broadcasting network. In 1892 he described in minute detail the electronic valve several decades before it was "invented". It was during this period that Tesla was able to demonstrate publicly the transmission of HF power without wires to light two lamps. Neon and fluorescent tubes were illuminated in public, all without the vital patent protection. He was able to demonstrate in his laboratory what he called "special radiation" waves which were able to penetrate metal and register on a photographic plate. Again he had made a revelation three years before Rontgen in Germany announced his discovery to the world of X-rays.

Another of Tesla's inventions was what he called his "telegeodynamic oscillator". This device, operated principally by compressed air, was able to shake buildings violently in the immediate neighbourhood of his laboratory identical to an earthquake. As the oscillations built up in strength, complete buildings rocked about shattering glass and peeling plaster off in sheets, water and gas pipes sheared and the panic stricken populace rushed into the streets convinced New York was in the grip of a major seismic quake. Only police intervention stopped the experiment and the destruction of the area. It is not recorded what the aftermath of the experiment produced, but Tesla claimed he could destroy the tall Chrysler building (then New York's highest) in thirty minutes using a total of 2½ horsepower to drive his oscillator.

He also claimed by using a modified version of his oscillator, it could be used to locate ore and oil deposits far underground. Another "first" by over forty years when a similar method using small controlled explosions was used by geologists to locate ore, water and oil.

In 1898 he publicly demonstrated his remote controlled model boat at Madison Square Gardens using "wireless" control and power. The demonstration was an unqualified success and the experts were agog over his servo mechanisms which altered the direction and speed of his model boat. The transmitter and receiver were separated by several hundred feet and the boat carried bow and stern lamps lit by remote power. Again this experiment was forty years ahead of identical methods used by guided missiles, pilotless target planes and torpedoes. Once again patent rights were not taken out to protect these important developments.

In 1899 Tesla, with finance provided by J P Morgan, moved his workshop to Colorado Springs. The building was constructed on the summit of a small mountain with power supplied by the local generating station in the nearby town. Here he constructed a giant Tesla coil which built up a potential of 12 million volts creating miniature lightning flashes 135 feet long. During one experiment he delayed throwing the discharge switch and promptly burnt out the alternators at the town generating plant. Nothing daunted, he rewired the damaged alternators within a week and carried on with his experiments! Further finance was provided by Colonel John Astor and eventually Tesla moved his laboratory back to New York. As his work failed to show returns over the investments provided by Morgan and Astor and coupled with the failure to secure patent protection, both these wealthy men withdrew their sponsorship and Tesla found himself without a backer. Only very small occasional grants were forthcoming and Tesla was forced through circum-

stances to abandon his dream of a world power and broadcasting network.

In the period between 1906 and 1914 Tesla began to develop the turbine. He joined forces with the Allis Chalmers company in this venture which after a period, failed because of his abrasive personality and his determination not to commit anything in writing or on paper. Although the Tesla turbine was different in design to the now accepted type, it differed only with the blade construction. Once again, Tesla made nothing out of his work on the turbine.

In 1917 during a lecture tour he theoretically demonstrated the main principles of radar and earlier, had demonstrated in his laboratory, how wireless waves could be deflected by metal objects. Again, radar was anticipated by over thirty years.

Following a disastrous fire which destroyed his New York laboratory and workshop, Tesla was hamstrung by lack of finance which prevented him from developing new inventions. His cardinal error was failure to secure patent protection and whilst manufacturers made fortunes from his ideas and developments, the man who had invented them grew poorer and poorer.

In 1915 Tesla made an unsuccessful attempt to obtain a court injunction against Marconi. Tesla maintained he had demonstrated in theory and in practice wireless transmission as far back as 1890. However, in later years the US Supreme Court reversed the decision and upheld Tesla's claim and cancelled Marconi's patents on the grounds that they had been anticipated and demonstrated by Tesla long before the patent rights had been issued. This momentous decision by the courts did nothing to aid Tesla financially.

His last serious work was the development of the so called "death ray", which some believe was an early attempt to produce a laser. Others maintain it was a development of a high frequency, concentrated beam of some sort that was powerful enough to stop an internal combustion engine or cause serious burns and even death, to anyone who stood in its path. Unfortunately, Tesla never committed anything to paper except for a few odd notes. His agile brain stored every detail of his many creations and he could totally recall ideas and data years later.

Even his own laboratory assistant knew little of a particular project as Tesla never discussed anything in detail. The assistant worked under direction and instruction knowing almost nothing of the details until the particular scheme was completed. With very good reason Tesla was highly suspicious of having his ideas stolen and pirated by others.

As he was unable to develop genuine friendships with others, particularly women, he was branded as distant, cold and without emotion. Shunned and cheated by the industrial world he helped create, plagued by poor health and almost penniless — his only friends were the pigeons of New York. With these birds he was able to demonstrate an unknown side of his character — that of love and affection. The answer to this enigma possibly lies in his complete lack of faith and trust with his fellow men who, almost without exception, openly used him and his remarkable talents, discarding him when his usefulness was over.

When he was unable to feed the pigeons himself because of illness, Tesla engaged a messenger boy to perform the duty for him. He befriended these birds and went to any length to provide them with food and care, sometimes to his own detriment. To one particular white pigeon Tesla was very attached and a special understanding and bond developed between them; almost a unique relationship, but founded on complete trust between man and bird.

One day this bird flew into the room and Tesla instinctively knew it was dying and had come to bid its friend farewell. He was heartbroken and disconsolate over its death and for days he wandered moodily about the streets grieving his loss.

His health gradually deteriorated and he breathed his last on a frosty morning in January, 1943. It is said that when he died a great wave of pigeons rose up into the cold, wintry New York sky as a farewell and tribute to their friend and benefactor.

When next you are out beyond the city limits, observe the power lines with their sentinel pylons that march across the countryside bringing power to homes and industry. These are indeed a reminder, as well as a lasting monument, to the man who gave us the twentieth century.

Nikolas Tesla, the forgotten genius . . .

Reprinted from Radio ZS
February 1983 **AR**

WIA MEMBER FROM OVER-THE-SEAS

Jim Sarno W5TGE is one of our many overseas members. He has been an amateur for fifty five of his seventy six years and is pictured here in his well appointed shack.

AR

Amateur Radio Abbreviations

These abbreviations are frequently used throughout this magazine and other amateur radio publications. They are printed here to assist new amateurs and amateurs-to-be. The abbreviations appear throughout many articles and also in Hamads.

A — ampere
AC — alternating current
ACNF — AMSAT co-ordination and network frequency
A/D — analog-to-digital
AF — audio frequency
AFC — automatic frequency control
AFSK — audio frequency-shift keying
AGC — automatic gain control
AH — ampere hour
AH — after hours
ALC — automatic load (or level) control
AM — amplitude modulation
am — morning
AMSAT — Radio Amateur Satellite Corporation
AMTOR — amateur teleprinting over radio
ANL — automatic noise limiter
AOCP — Amateur Operator's Certificate of Proficiency
AOS — acquisition of signal
AR — Amateur Radio Magazine
ARA — Amateur Radio Association
ARC — Amateur Radio Club
ARES — Amateur Radio Emergency Service
ARRL — American Radio Relay League
ARS — Amateur Radio Society; Amateur, Radio Station, amateur radio service
ASCII — American National Standard Code for Information Interchange
ASSC — Amateur Satellite Service Council
ATV — amateur television
AVC — automatic volume control
AWG — American wire gauge
az-el — azimuth-elevation

BASIC — beginner's all-purpose symbolic instruction code (computer language)
Balun — balanced to unbalanced transformer
B — Byte; a group of bits or binary digits, usually eight
BC — broadcast
BCD — binary-coded decimal
BCI — broadcast interference
BCL — broadcast listener
BH — business hours
BIT — binary digit
BFO — beat-frequency oscillator
BPF — band-pass filter
BPL — Brass Pounders League
Bps — bits per second
BPT — bipolar transistor
BW — bandwidth
BWL — loaded bandwidth

C — Celsius
CAC — Contest Advisory Committee
CATVI — cable-television interference
CB — citizens band
CCIR — International Radio Consultative Committee
CCITT — Consultative Committee for International Telegraph and Telephone, a part of ITU
CCW — coherent cw; counterclockwise
Ch — channel
cm — centimetre
CMOS — complementary-symmetry metal-oxide semiconductor
coax — coaxial cable or connector

COR — carrier-operated relay
CPU — Central Processing Unit
CRRL — Canadian Radio Relay League
CRT — cathode-ray tube
CSMA — carrier sense multiple access
CT — center tap
CTCSS — continuous tone-coded squelch system (PL)
CW — continuous wave (code); clockwise

D/A — digital-to-analog
dB — decibel
dBc — decibels referenced to carrier level
dBd — antenna gain referenced to a dipole
dBi — antenna gain referenced to isotropic; a dipole has a gain of 2.14 dBi
dBm — decibels referenced to 1 mW
DBM — doubly balanced mixer
DC — direct current
DEMUX — demultiplexer
DF — direction finder; direction finding
DIP — dual in-line package
DOC — Department of Communications
DPDT — double-pole double-throw
DPST — double-pole single-throw
DSB — double sideband
DTL — diode-transistor logic
DTMF — dual-tone, multi-frequency
DVM — digital voltmeter
DX — long distance
DXAC — DX Advisory Committee
DXCC — DX Century Club

E — voltage
EAROM — electrically alterable read-only memory
ECL — emitter-coupled logic
ECO — electron-coupled oscillator
EHF — extra high frequency
EIRP — equivalent isotropically radiated power; erp referenced to an isotropic antenna
el — element
EME — earth-moon-earth (moonbounce)
EMF — electromotive force (voltage)
EMI — electromagnetic interference
EMP — electromagnetic pulse
EOC — emergency operations center
EPROM — erasable programmable read-only memory
EQX — equator crossing
ERP — effective radiated power
EUV — extreme ultraviolet radiation

f — frequency
F — farad; Fahrenheit
FAX — facsimile
FCC — Federal Communications Commission
FD — Field Day
FET — field-effect transistor
FF — flip-flop
FL — filter
FM — frequency modulation
FMT — Frequency Measuring Test
FSD — full-scale deflection
FSK — frequency-shift keying
ft — foot

g — gram
GaAs FET — gallium arsenide field-effect transistor
GDO — grid-dip or gate-dip oscillator
GHz — gigahertz
gnd — ground

h — hour
H — henry
HAAT — height above average terrain
HDLC — high-level data link control
HF — high frequency
HFO — heterodyne-frequency oscillator
HI — greetings
HPF — highest possible frequency
Hz — hertz

I — current
IARU — International Amateur Radio Union
IC — integrated circuit
id — identification, identifier
ID — inside diameter
IF — intermediate frequency
IMD — intermodulation distortion
in — inch
in/s — inches per second
I/O — input/output
IRAC — Interdepartment Radio Advisory Committee
IRC — International Reply Coupon
ISB — independent sideband
ITU — International Telecommunication Union
IW — Intruder Watch

J — joule
j — indicator for reactive component of an impedance (+j inductive; –j capacitive)
JFET — junction field-effect transistor

K — kilobyte, Kelvin
k — kilo, 1000
KB — keyboard
kg — kilogram
kHz — kilohertz
km — kilometres
km/h — kilometres per hour
kV — kilovolt
kW — kilowatt
kWh — kilowatt hour

LAOCP — Limited Amateur Operator's Certificate of Proficiency
L — inductance
lb — pound
LC — inductor-capacitor
LCD — liquid crystal display
LED — light-emitting diode
LF — low frequency
LMO — linear master oscillator
LO — local oscillator
Loran — long-range navigation
LOS — loss of signal
lp — log periodic
LPM — letters per minute
LSB — lower sideband
LSI — large-scale integration
LUF — lowest usable frequency

m — metre (distance or band)
M — mega
mA — milliampere
mAh — milliampere hour
MARS — Military Affiliate Radio System
MDS — minimum discernible signal
MF — medium frequency
mH — millihenry
MHz — megahertz
mi — mile
mic, mike — microphone
mini-DIP — dual in-line package, 8 pins
mph — miles per hour
mps — miles per second
mix — mixer
mm — millimetre
MO — master oscillator
modem — modulator/demodulator
MOS — metal-oxide semiconductor
MOX — manually operated switching
ms — millisecond
m/s — metres per second
MSB — most-significant bit
MSI — medium-scale integration
MSTV — medium-scan television
MUF — maximum usable frequency
MUX — multiplex; multiplexer
mV — millivolt
mW — milliwatt

NAOCP — Novice Amateur Operator's Certificate of Proficiency
NBFM — narrow-band frequency modulation
NBVM — narrow-band voice modulation
NCS — net control station
NF — noise figure
nH — nanohenry
NiCd — nickel cadmium
NL — noise limiter
NMOS — n-channel MOS device
NPN — negative-positive-negative
NPRM — Notice of Proposed Rule Making
ns — nanosecond
NTS — National Traffic System (ARRL).
NZART — New Zealand Amateur Radio Transmitters
OD — outside diameter
OM — old man
op amp — operational amplifier
osc — oscillator
OSCAR — Orbiting Satellite Carrying Amateur Radio
OTA — operational transconductance amplifier
OTC — Old Timer's Club
oz — ounce

p/pp — page/s
P — power
PA — power amplifier
PC — printed or etched circuit
PCB — printed circuit board
PEP — peak envelope power
PEV — peak envelope voltage

pF — picofarad
Ph — phone
PIV — peak inverse voltage
pk — peak
pk-pk — peak-to-peak
PLL — phase-locked loop
PM — phase modulation
pm — afternoon/night
PMOS — p-channel MOS device
PNP — positive-negative-positive
pot — potentiometer
ppd — postpaid
PROM — programmable read-only memory
PRV — peak reverse voltage
PSK — phase-shift keying
PSU — power supply unit
PTO — permeability-tuned oscillator
PTT — push-to-talk
PV — photovoltaic
PVC — polyvinyl chloride

Q — reactance — resistance ratio
QCWA — Quarter Century Wireless Association
QRP — low power (less than 10-W input)
QTHR — address correct in current WIA Call Book

R — resistance
RAM — random access memory
R/C — radio control
R-C — resistor-capacitor
RCC — Rag Chewers Club
rcvr — receiver
rev/min — revolutions per minute
RF — radio frequency
RFC — radio-frequency choke
RFI — radio-frequency interference
RI — radio inspector
RIT — receiver incremental tuning
RM-(number) — number assigned by FCC to a petition for rule making
RMS — root-mean-square
ROM — read-only memory
RS — Radiosport Satellite (USSR)
RSGB — Radio Society of Great Britain
RST — readability-strength-tone
RTL — resistor-transistor logic
RTTY — radioteletype
Rx — receiver

s — second
SAE — self-addressed envelope
SASE — stamped s.a.e.
SCR — silicon-controlled rectifier
SET — Simulated Emergency Test
SHF — super-high frequency
SM — silver mica (capacitor)
SNR or S/N — signal-to-noise ratio
SPDT — single-pole double-throw
SPST — single-pole single-throw
SS — Solid State
SSB — single sideband
SSC — Special Service Club/AMSAT Phase III special service channels
SSTV — slow-scan TV
STD — subscriber trunk dialling
SWL — shortwave listener
SWR — standing-wave ratio

sync — synchronous, synchronizing
SYNCART — synchronous satellite carrying Amateur Radio transponder
TA — technical advisor
TC — technical co-ordinator
TCA — time of closest approach
Tcvr — transceiver
THz — terahertz
THD — total harmonic distortion
tpi — turns per inch
T-R — transmit-receive
T-T — Touch-Tone
TTL — transistor-transistor logic
TTY — teletypewriter
TV — television
TVI — television interference
Tx — transmitter
UHF — ultra-high frequency
UJT — unijunction transistor
UoSAT — University of Surrey educational/research satellite (Great Britain)
USB — upper sideband
UTC — Universal Co-ordinated Time
V — volt; voltage
VCO — voltage-controlled oscillator
VCXO — voltage-controlled crystal oscillator
VFBO — variable-frequency beat oscillator
VFO — variable-frequency oscillator
VHF — very-high frequency
VLF — very-low frequency
VMOS — vertical power FET
VOM — volt-ohm-milliammeter
VOX — voice-operated switching
VR — voltage regulator
VSWR — voltage standing-wave ratio
VTVM — vacuum-tube voltmeter
VXO — variable crystal oscillator
W — watt
WAC — Worked All Continents
WARC — World Administrative Radio Conference
WAS — Worked All States
WBFM — wide-band FM
WPM — words per minute
wVDC — working voltage, dc
X — reactance
xcvr — transceiver
xvtr — transverter
xmtr — transmitter
xtal — crystal
XYL — married lady
YL — young lady
Z — impedance
Z — see UTC
5BDXCC — Five-Band DXCC
5BWAC — Five-Band WAC
6BWAC — Six-Band WAC
5BWAS — Five-Band WAS
° — degrees
α — alpha; angles; common-base forward current-transfer ratio of a bipolar transistor
β — beta; angles; current gain of common-emitter transistor amplifiers
γ — gamma; angles
△ — delta; increments
σ — gamma; angles
ε — epsilon; base of natural logarithms (2.71828)
θ — theta; angles
λ — lambda; wavelength; longitude
μ — mu; micro (10^{-6}); amplification factor; permeability
μP — microprocessor
π — pi; 3.14159
Σ — sigma; summation
T — tau; time constant; time phase displacement
φ — phi; angles; latitude
Ψ — psi; angles
Ω — omega; resistance in ohms
ω — omega; angular velocity, $2\pi f$
33 — fondest regards (between females)
73 — best regards
88 — love and kisses

THUMBNAIL SKETCHES

Alan Shawsmith, VK4SS
35 Whynot Street, West End, Qld 4101

R JOHN THORLEY VK4RT

There are those amateurs who, into whatever era they are born, are destined to leave their mark upon it. One such was R. John Thorley VK4RT who first gained his AOCP in 1936 while residing at the suburb of Annerley, Brisbane.

John was a Mechanical Engineer by trade, consequently homebrewing presented few problems to him. His immediate post-WWII four element wide spaced Yagi atop a tall slender lattice tower, built by his own hands down to the last nut and threaded bolt, stood as a symbol to his ability. His first receiver and transmitter was the usual 1-V-1 and MOPA —but he soon advanced to using war disposals gear and a Hallicrafters SX28 Receiver (one of the most popular amateur sets ever produced).

VK4RT had the honor of serving a term as VK4 WIA President, early post-WWII. He also capably handled the Disposals Equipment Department. John was a very able 'after dinner speaker' — an ability which qualified him admirably for the job of President and one he used on every possible occasion to promote the WIA and AR.

He was a keen DXer, close to the top of the ladder when active and always maintained that his interest in AR was first stimulated by Fred VK4RF, another keen DXer.

Professionally, John VK4RT was self-employed, running his own engineering shop for many years. Eventually he sold out and accepted work less exacting and taxing, ie: a commercial traveller in mechanical hardware. It was in the course of this duty that he met with a fatal road accident, thereby sadly cutting short a promising career in his work and amateur radio, in the prime of his life. He was acutely missed by this writer, a personal friend. **AR**

Newspaper Clipping of John's Exploits.

Spoke to 70 friends in 35 countries—all in 24 hrs

By a Staff Reporter, who "sat in" with a "ham" during the week-end's long-distance contest.

JOHN THORLEY, of Emma Street, Holland Park, yesterday "travelled" the world scores of times at 669,600,000 miles an hour.

And he had plenty of time to stop and talk to more than 70 friends in 35 foreign countries.

John is not a miracle man. He is just one of about 1000 radio "hams" in Australia and New Zealand who did the same thing yesterday.

They were competing in a long-distance contest arranged for all Australasia "hams" by the wireless associations of both countries.

Their aim was to log the most foreign stations in 24 hours.

Five-hour break

John began at 6 pm on Saturday, and apart from a forced five-hour break due to interference, did not leave his transmitter until 6 pm last night.

Yesterday I watched him steer his 186,000 miles-a-second voice waves to all parts of the globe.

Walo, in Chile (South America), 8000 miles away, was "just going to bed." He apologised for his bad English, and wished John the best of luck.

"Charlie" in Portugal, 12,000 miles away, wished Brisbane "good morning" in broken English. It was good weather in Lisbon, he said.

"Good hunting"

Glib American "Harry," from Honolulu, said: "Good hunting, John. Boy, you're sure coming over fine."

John wished them "all the best from Brisbane" and promised to "see" them again when he had more time to "yarn" at length.

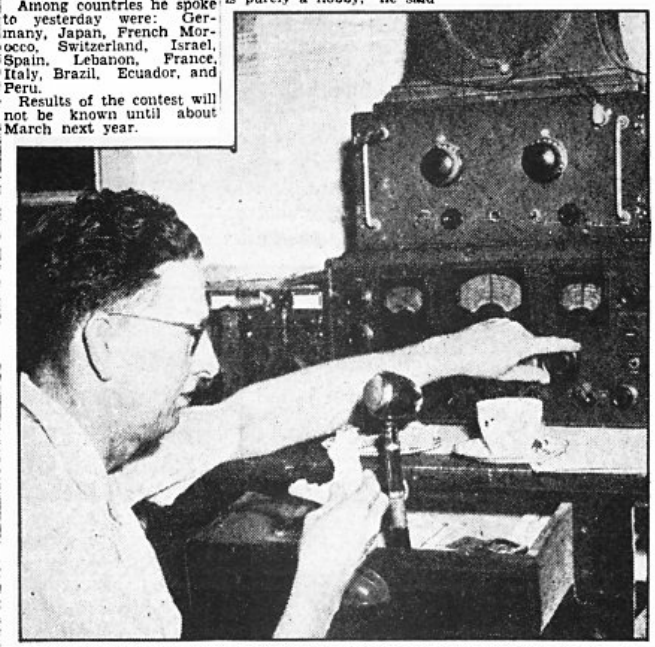
He exchanged a number with each station operator he contacted, and they exchanged one with him.

All foreign "hams" will forward their logs to the Australian Wireless Institute and John's final tally of calls can be confirmed.

Among countries he spoke to yesterday were: Germany, Japan, French Morocco, Switzerland, Israel, Spain, Lebanon, France, Italy, Brazil, Ecuador, and Peru.

Results of the contest will not be known until about March next year.

FOOTNOTE: John, who owns a small city engineering shop, bought about £200 worth of equipment from army disposals to build his home radio station. "It is purely a hobby," he said



HOLLAND PARK radio "ham" John Thorley did not leave his radio set for lunch yesterday during his marathon talk with overseas enthusiasts.

SAFETY RECALL NOTICE

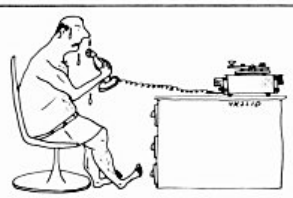
Purchasers of **Six Outlet** power boards marketed under the 'Click' brand name and marked **Series 106** are warned that they are unsafe to use. Purchases may have been made between 21st September, 1984 and 14th December, 1984 from Target Stores. Please return for **free replacement** from the store of purchase. The new model marked Series 106B now on sale is completely safe to use and is covered by Certificate of Suitability CS/436/Q.

Please note: This Safety Recall applies only to 'Click' 6-way White Power Boards marked Series 106, not to 'Click' 4-way Power Boards or any other 'Click' product. The replacement model Series 106B is completely safe to use.

Click Industries Pty Ltd 297-305 Victoria Street, Brunswick Victoria 3056. Phone (03) 387 2499

This article appeared in the Sunday Morning Herald 19 January 1985 and was contributed by Tim Mills VK2ZTM for the interest of amateurs.

AR



"Yes! Yes! OM. I know it's winter in the USA!!!"

"The Linear Fan just switched in, OM."

Cartoons by Bill Martin VK2COP

NOVICE NOTES

Ron Cook, VK3AFW
Technical Editor

JUST A PIECE OF WIRE

Well here I am for my first appearance in 1985 — better late than never! As I first started out in amateur radio on VHF at a time when home-brewing was essential I automatically cast a critical eye over any piece of wire carrying RF. Consequently I have avoided some problems which can be very puzzling to those that encounter them.

Any piece of wire has inductance, even if it is quite straight; the longer the wire the greater the inductance. A piece of wire only 100 mm long and 0.1 mm in diameter has an inductance of 0.1 microhenry. Further all pieces of wire have some capacitance associated with themselves and their surroundings. When you build equipment such as an ATU or antenna you are likely to use some reasonably heavy gauge wire for interconnections. The wire makes the connections but also adds some unwanted inductance and capacitance. In the case of the ATU it is unlikely to be noticed as the ATU will tune it out. In the case of an antenna you may not be so lucky. Suppose you have bought or built a balun to match your 50 ohm coaxial cable to the dipole of a beam. You will use some wire to connect the appropriate terminals of the balun to the dipole element. *What can go wrong?*

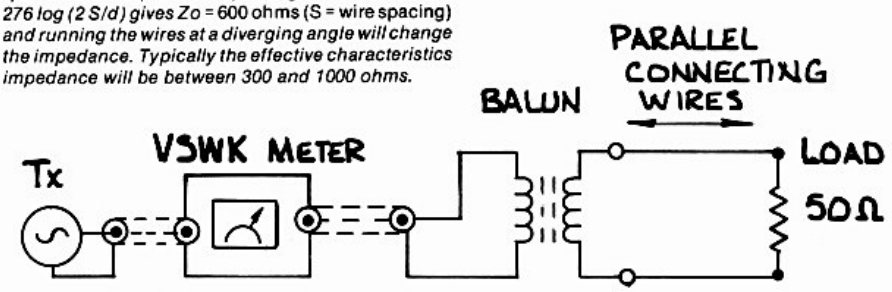
Well if that is all you do, and if the wires are of equal length and as short as you can conveniently make them, probably you will notice no ill effect. The beam may be resonant a little lower than you expected but it will probably work very well. Now suppose that you wanted to check the balun prior to installation, which you would probably want to do if it were home brew.

Firstly you would obtain a balanced 50 ohm load that was non-reactive at the test frequency. Next you would get a VSWR meter that was reasonably accurate at the test frequency, you would connect the load to the balun with two equal length pieces of wire and measure the VSWR with the lowest power level necessary to give accurate readings. Remember that most VSWR meters use diodes and these need up to 0.6 volts to make them conduct. Using too little power can give a better VSWR reading than actually exists. Test this out yourself by comparing the results for a VSWR of about 1.3:1 measured with just enough power to get FSD in the "Set" condition and again with the power level at maximum. Most VSWR meters will give a more optimistic reading at the lower powers.

Well let's assume that you can make accurate VSWR measurements. You may be dismayed to find that your "Yewbeaut" balun appears to introduce a VSWR of 1.3:1 or more. Actually the problem is most likely those two short pieces of wire. If they are around 40 mm long and the test frequency is 28 MHz then they would account for all of the VSWR.

What happens is that the two pieces of wire appear to be a short length of open wire transmission line. To analyse what happens I chose two 14 gauge wires spaced 121 mm apart. This gives an impedance of 600 ohms. Next, using a programme supplied by Evan VK3ANI, I set to work with my calculator. Fig 1 shows the assumed test setup which is as discussed earlier.

Figure 1(b) Assumed Test Arrangement
The connecting wires were taken to be 14 SWG spaced 121 mm (4.8 inches). Using the formulae Zo = 276 log (2 S/d) gives Zo = 600 ohms (S = wire spacing) and running the wires at a diverging angle will change the impedance. Typically the effective characteristics impedance will be between 300 and 1000 ohms.



Electrical length (degrees)	Length at 28 MHz		VSWR seen by balun
	mm	inches	
0	0	0	1.00
1	29.8	1.17	1.23
2	59.5	2.34	1.51
3	89.3	3.5	1.85
4	119.0	4.7	2.25
5	148.8	5.9	2.71
10	297.6	11.7	6.12
12	357.1	14.1	8.01
15	446.4	17.6	11.4
20	595.2	23.4	18.6

Table 1: Calculated VSWR for circuit in Fig 1(b).
The lengths can be calculated at any frequency by finding the length equal to 1 electrical degree. The formulae for the length of 1 electrical degree is: length = 5/6f metres where f is in MHz. eg at 1.84 MHz 1 electrical degree is 453 mm.

Table 1 shows the results of the calculations. If the wires have no length at all they have an electrical length of 0 degrees. An electrical quarter-wavelength is 90 degrees, a half-wavelength is 180 degrees and so on. To give a better insight into what this means, physical lengths for a frequency of 28 MHz are included in the table. I was surprised to see how short the wire had to be to introduce a VSWR of less than 1.5:1. Indeed the whole exercise was triggered by the experiences of another amateur who was carrying out some tests on several baluns, all of which seemed to be poor on 28 MHz. Changing the connections to the balun made a tremendous improvement.

The moral is, of course, keep connections short. As mentioned at the beginning, the problem is not so noticeable when the balun is connected to an antenna. The centre of the antenna is moved to the balun and the dipole is made longer by about the length of the wires. Two pieces of wire 40 mm long could move the resonant frequency of a dipole out of the novice segment on 28 MHz. Trimming the outer ends will of course bring the resonance back quite easily.

Well that's all until next time. *73 de VK3AFW.*

References: The Radio Amateur's Handbook, ARRL, 1982 ed.
The VHF Handbook, WI Orr, HG Johnson, first ed.
Smith Chart Programme for Programmable Calculators, E Jarman, private communication.

AR

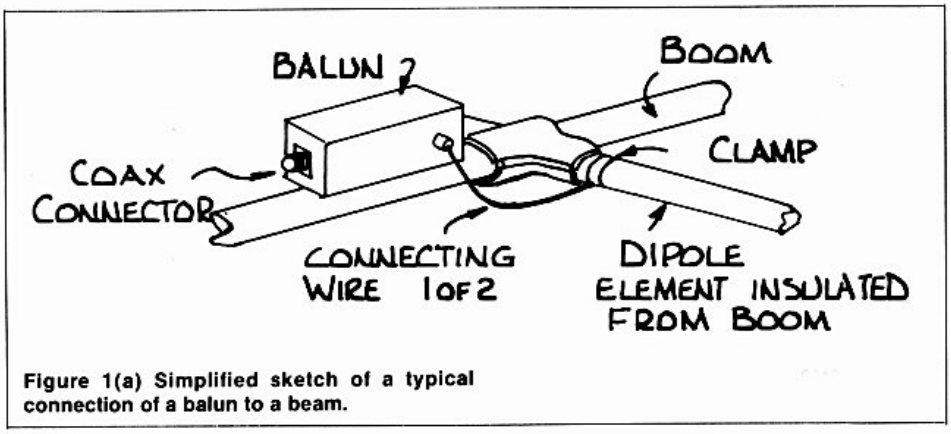


Figure 1(a) Simplified sketch of a typical connection of a balun to a beam.

BRITISH PARTNER FOR EUROPE'S LARGEST COMPUTER CHAIN

A $12.6 million joint venture company has been formed by Applied Computer Techniques (ACT) of Birmingham, in the English midlands, and the Tandy Corporation of the United States to form Europe's largest retail computer chain with some 500 outlets.

In Australia, ACT is represented by Barson Computers Pty Ltd, a distributor which recently won several major contracts to supply Apricot computers to the Government of New South Wales.

From New Technology in Britain

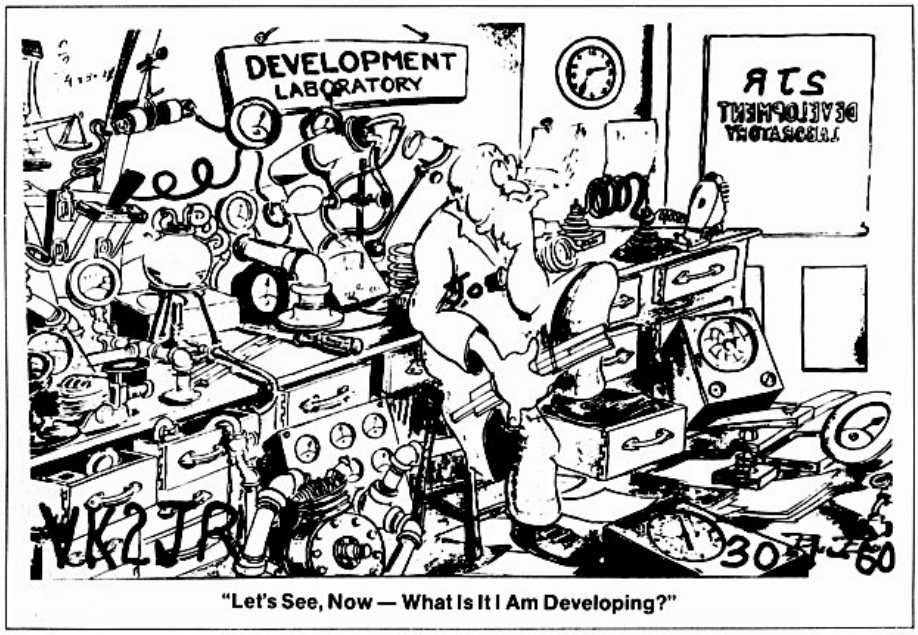
AR

Special 75th Anniversary

VK2 MINI BULLETIN

Feature

EVERYTHING HAS A BEGINNING



"Let's See, Now — What Is It I Am Developing?"

It is understood that dissatisfaction with the treatment from authorities in 1910 forced the 'experimenters' together to improve their lot.

The late Joe Reed VK2JR presented the newspaper cutting in article "The WIA in VK2" this issue to the Division in 1960 — at the 50 year point — which seems to fix the commencement date.

Does any reader have any material which has historic significance to the early Institute activities as well as amateur radio in general? Are you in a position to donate it or allow copies to be made of same? Perhaps the best thing to do in the first instance is to contact your local Division's Historian.

Some of the VK2 Division's current research is being undertaken by Jo Harris VK2KAA. Her particular interest is tracing early amateurs and the callsigns in use. To date there is a gross indexed collection of over 8000 names. Jo will have an article on her findings in AR later this year.

A lot of material that comes to hand covers amateur radio from the national point of view and this work is being done by the Federal Historian Max Hull VK3ZS.

There are many others who, in their own way, are collecting or recording history. The Institute would like to hear from you so that your work may be noted in a master record of research that is being undertaken. Those interested in some recorded history will find a wealth of information in the WIA Book Volume 1 which came out in 1982. Copies are available from Divisional bookshops. By now there should be sufficient material on hand for the next edition.

The VK2 and Federal Historians are as follows:
VK2 Jo Harris VK2KAA, c/- PO Box 1066, Parramatta, NSW, 2150
Federal Max Hull VK3ZS, c/- PO Box 300, Caulfield South, Vic, 3162

The late Joe Reed VK2JR (he passed away on 23rd July 1969) was a wealth of information. An excellent speaker and story teller, much of his knowledge has been retained by way of the reel to reel tapes and slides in the Division's lecture collection. These were developed during the late 50's and early 60's period when Harold VK2AAH was the Lecture Officer. It is pleasing to be able to report that the majority of the collection remained intact during many years at Atchison Street when many must have felt anything no longer in use or state of the art recontents was so much junk. It will only be a matter of time when researchers and historians will find their contents invaluable.

The sketch above Joe appears to have considered as perhaps a self portrait for written on the back is "*This amusing QSL card illustrates a typical scene in VK2JR's development laboratory at his Northbridge QTH . . . JR. 30.1.60*"

AR

VK2 MINI BULLETIN

Tim Mills VK2ZTM
VK2 MINI BULLETIN EDITOR
PO Box 1066, Parramatta, NSW 2150

It is an honour for VK2 to have a feature section in the March issue, 75 years on, since that meeting in the Hotel Australia on the afternoon of the 11th March 1910. Regrettably that grand old hotel has fallen, in the name of progress, to the wrecker's hammer. In its place is part of the skyscraping MLC Centre. This month it was our turn to provide some extra content, each Division having been asked to provide something in their nominated month. There is a considerable volume of material available, the enclosed is but a small part of it. It is hoped that a further selection will be presented later in the year.

CAUGHT/COURT

Several VK2s have been approached to contribute something and more yet to be approached. If you are missed don't let that deter you for a magazine like "Amateur Radio" is not just for the regular contributors but every member. Preparing for this month required considerably more involvement than the usual Mini Bulletin. As the deadline approached the 'main stories' kept changing. First, following months of problems with abuse on and at the Sydney repeaters, in particular VK2RWI 7000, several offenders have been apprehended. In particular, one was detained on 10th January, and held in custody until a further court appearance on 14th January. Found guilty by the court, he was sentenced to two concurrent terms of 6 months with hard labour for some of the offences. In recent times other offenders have been apprehended and have yet to face the courts. When these matters have been finalised some background information can be released, however because of matters and investigations pending such details must remain suppressed, for the moment. *See special report elsewhere in this issue.

CHANGES

On Wednesday 16th January an adjourned Council meeting, to discuss planning for the 75th commemorations, had some extra business. A couple of days previously Divisional Secretary Peter VK2PJ had been advised by his employer to prepare for a training course in east coast USA, leaving before the end of January. As the trip would extend past the end of the Divisional year, Peter requested leave of absence from Council and his secretarial duties. To complete the balance of the Divisional year, council considered several options. It was decided to make some position changes in that Jeff VK2BYY would take over secretarial duties and relinquish the presidential role. Tim VK2ZTM would move up from Vice President to President. Roger VK2ZIG/NWH added Vice President to his duties. Other Council positions remained unaltered. The other Members being Les VK2KCP, Max VK2YKF, Mike VK2AUE and Peter VK2PJ (on leave of absence).

I personally would like to thank Jeff for a difficult year in the presidential role, having been in the position before myself. With so little of the year left I would like to see the records show the positions held by each Council Member for the majority of the year, otherwise the future historians may 'become confused'. Jeff is also about to change his occupation to an even more demanding role which will force him to forgo some of his Institute involvement.

FEDERAL CONVENTION

The Federal Convention is to be held in Melbourne 26th-28th April. Agenda items should reach Divisional Council by mid March. They have to be checked before submission to ensure that they are not existing policy etc. The Conference of Clubs (13/14 April), at Amateur Radio House, includes discussion of all Federal items, not just those submitted by VK2. Some of the early items are included in Amateur Radio, the later ones aired on broadcasts. Copies of all are circulated to affiliated clubs. Any member who would like to express comment on the agenda items should seek out their club delegate prior to 13th April. Council renominated the present Federal team for 1985, being Federal Councillor Stephen Pall VK2PS, and alternates Tim Mills VK2ZTM and Wally Watkins VK2DEW. Stephen has given notice that he will not be seeking renomination after the end of 1985.

HISTORICAL RESEARCH

This is a time consuming function. For some months now Jo Harris VK2KAA has undertaken an aspect of this in VK2 and has specialised in callsigns — current and previous — and into the people who are or were their holders. Now some of the time spent is starting to show results as there are over 8,000 cross indexed references. Jo would like to hear from everyone in due course and a questionnaire form is available (inquire from the Divisional Office). In turn Jo can assist you. Perhaps you are the new holder of a callsign and would like to know of its previous holders. Get in touch with Jo VK2KAA. It is hoped that later this year a short article will be written of aspects of Jo's research.

As mentioned elsewhere, if you are doing any research please log into the Division so that the knowledge of who is doing what is centrally co-ordinated.

SEARCHING FOR ANSWERS

In preparing some of the material for this issue I kept coming across interesting things. These are some of the questions I would now like to find an answer to —

George A Taylor called the first meeting in 1910 and still appeared to be involved during the 1920's, however no record can be found of callsigns he may have held . . .?

The Division has held many postal and (VK2WI) station addresses. The longest appears to be Box 1734 GPO, the 30's to the late 70's. At one stage it was also 1734 JJ. What others have been held?

VK2WI is listed in callbooks in the 50s as having station addresses of Kingsford, Castlereagh Street, and Clarance Street before it was transferred to Dural about 1957. What were these locations?

What was the Co-op during the 1950's?

In a 1938 callsign list there were about 25 radio clubs. After the war (1946) there were only two listed — in many cases the previous callsigns were not listed — and by 1950 only VK2BV and VK2WI carried on. In a future article club calls over the years will be featured in the hope that some old timers will remember and advise before all details escape.

LIBRARY TARDINESS

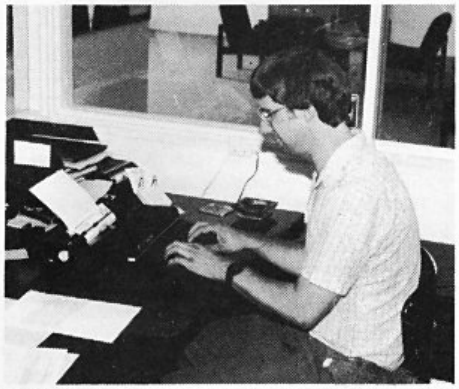
Council has recently looked at the library facilities at Amateur Radio House. It was noted that some items are not being returned within the borrowing time limits. It was also found that many of the new issues were being borrowed for up to a month at a time which reduced their availability to others. To make these new editions available to a wider range of the membership they will only be available for reading within the library for the first few months of their life. The Divisional Librarian will monitor these arrangements during the next few months. Members comments are sought on ways of improving facilities.

HISTORIC DISPLAY

For some time consideration has been given to mounting a display area for historical items of amateur radio at Parramatta. It had been considered that a range of display cabinets be obtained. It is now felt that the section towards the front windows at the head of the stairs may be more suitable if it is glassed in to provide a large secure area. Further thoughts will be given, as a project like this could be a fitting finale to the 75th celebrations.

AR

Photographs courtesy Les Pall VK2KCP.



Above: Jeff VK2BYY at the Secretary's Desk.

Left: Divisional Group minus Mike VK2AUE. From left: Steve VK2PS, Max VK2YKF, Tim VK2ZTM, Jeff VK2BYY, Peter.VK2PJ, Roger VK2ZIG and Les VK2KCP.

The WIA in VK2

Tim Mills VK2ZTM,
Box 1066, Parramatta, NSW, 2150

The foundation for this article was first published in Amateur Radio for June 1980. The format has been retained and expanded to cover the past five years in the Division's life.

It is seventy five years this month since a group of "Wireless telegraph experimenters and enthusiasts" met to co-operate and improve their lot with the government of the day. From records to hand, the meeting was held on the 11th March 1910, in the Hotel Australia, Sydney, and as a result of that meeting the Wireless Institute of Australia was born. *See newspaper cutting of the meeting.* Soon after groups began forming in other States.

The WIA was formed two years ahead of what is now the RSGB and four years before the ARRL.

REGISTERED ASSOCIATION

In the early 20s the amateurs in the group drew up the Memorandum of Association of the Wireless Institute of Australia, New South Wales Division. In doing so it took over the effects and liabilities of the then unincorporated club of the same name. Seven amateurs moved to form a company on the 26th of May 1922, and on the same day registered an Association of the above name as a limited company.

NEW SOUTH WALES.

Certificate of Incorporation.

No. 86355

The Companies Act, 1899.

I Certify that an Association styled Wireless Institute of Australia New South Wales Division has been registered this day as a limited company, the Governor-in-Council having directed such Association to be registered with limited liability without the addition of the word "limited" to its name, pursuant to the provisions of Section 32 of the Companies Act, 1899.

Given under my hand, at Sydney, this Twenty sixth day of May, one thousand nine hundred and twenty two

Assistant Registrar of Joint Stock Companies.

Exd.

A copy of the Company Certificate.

DIFFERENCES AROSE

In the early 1930s differences arose between the professional and hobbyist within the Division and for some time the hobbyists became the "New South Wales Amateur Transmitters". The professionals became the IRE (now the IREE), and the Division absorbed the hobbyists to again become the WIA NSW Division.

See the 'beginning of IREE' in January 1985 issue of Amateur Radio for details about this period.

In 1939 permission was granted by the Radio Branch for Divisions to conduct broadcasts to inform their country members of happenings. Outbreak of war, however, stopped amateur activities and during this period the WIA was kept operational by the Federal Executive, who were located in Sydney.

A WIRELESS ENTHUSIASTS' INSTITUTE.

THE GOVERNMENT AND LICENSES.

"THREE GUINEAS FOR THE USE OF THE AIR."

Wireless telegraphy experimenters and enthusiasts are beginning to co-operate, and a number met last afternoon in the Hotel Australia in order to take the preliminary steps towards forming an institution. Vigorous comment was made upon the Government's action in regard to experimental licenses, and it was plain that besides a feeling for mutual help and interest, the restrictions alleged had had a large share in hurrying on the movement. Two ladies were among those present.

Mr. G. A. Taylor, who was elected chairman, explained the object of the meeting, and touched on the wonderful future ahead of the movement. "It is wise," he said, "to put our heads together and profit by each other's discoveries. Experimenters did not think the authorities were giving them fair encouragement. Every experimenter was at the beck and call of the military, naval, and postal authorities, and was allowed no legal redress if departmental officers thought he was breaking the rules. Mr. Taylor proposed the formation of an institution amongst experimenters and enthusiasts in wireless, for their mutual benefit. The object of founding the institution was to obtain justice, he explained; it would not be founded in opposition to any Government institution or department.

Mr. W. H. Hannam, seconding the motion, repeated the account of his attempts to obtain a Government license, which were described in "The Daily Telegraph" last week. "I have had a great deal of trouble with three Postmaster-Generals," said he, "and haven't got my license yet. They're still quibbling. We have all been treated in the same way, but no one has said or done anything until lately. Seventeen months of my time have been wasted since I was ready to erect my plant. Why should we have to pay three guineas for the use of the air, no far as experiments are concerned? The aerial navigation experimenters are charged nothing." One regulation, he complained, penalised an experimenter if the chief electrical engineer of the Postmaster-General's Department should certify telegraphic communication had been interfered with by his wireless appliance used "or intended to be used"!

Mr. J. H. A. Pike also supported the motion, which was carried, and a provisional committee was appointed to arrange for the next meeting.

Later, a general meeting of those interested will be called, and officers elected. It is proposed to assist in the formation of, and perhaps affiliate with, similar organisations in other States. The provisional committee is as follows: Messrs. J. H. A. Pike, W. H. Hannam, F. Bartholomew, W. H. Gosche, F. and H. Leverrier, E. A. Cleary, and A. Garnsey, Major Rosenthal, Captain Cox-Taylor, Dr. Brisseden, and the chairman. Mr. Hannam will act as hon. secretary pro tem. Besides these gentlemen, the Misses Perratt Hill, and Messrs. R. B. Armstrong and J. A. Henderson attended, and gave in their names as prospective members.

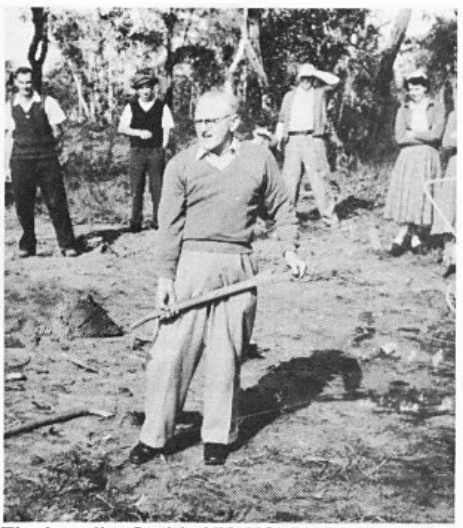
PRESENTED BY: JOE REED. VK2JR.

Left:
A copy of the 12th March 1910 Daily Telegraph report outlining the feeling against licence fees for radio experimenters. (Joe Reed VK2JR passed away on 23rd July 1969)

See also page 27.

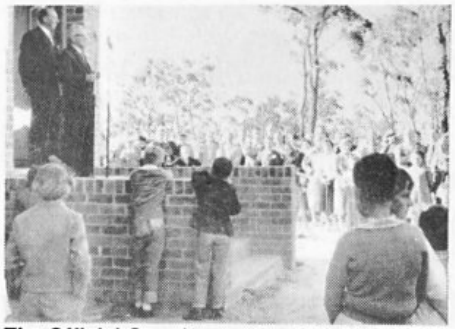
A HOME FOR VK2WI

At war's end amateur radio boomed with trained personnel from the Services coming into the ranks. The early 1950s saw many activities in the Division. Meetings at this stage were held at Science House in the city. A move was begun to establish a "Home for VK2WI" and a five acre property, on what was then very much the edge of Sydney, was purchased at Dural. Work commenced around 1953 and the building formally opened in 1957, after untold hours of work by members and friends. The property is the site of the Division's repeater and beacon facilities, . . . *together with a broadcast network from 160 metres to 70 cm. See the report "DURAL — 25 years of service" by Jeff Pages VK2BYY in AR for May 1982.*

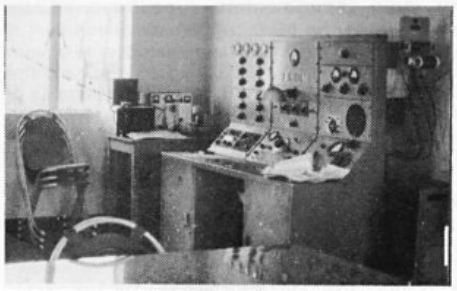


The late Jim Corbin VK2YC, Divisional President, turning the first sod on 5th August 1956.

A working bee held on the 12th August 1956 with, from left: VK2s EO, GE, ANP, AAJ and EN.



The Official Opening on the 15th May, 1957.



The First Station as it was at Dural in 1957.

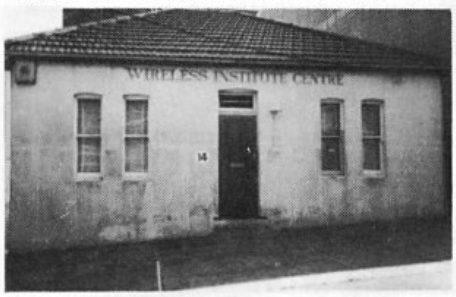
In 1954 the amateur service saw the introduction of a new class of licence, the Limited. This licence enabled those not proficient in Morse telegraphy to participate in the wonderful hobby of amateur radio, thus swelling the ranks with many more operators aspiring for the "Full" ticket.

DISPOSALS FOR MEMBERS BUY A PROPERTY

During the same period interest was shown in obtaining a city property for the Division and a Co-op was formed. However, nothing came of this venture. The end of WW2 had left this country with enormous stocks of radio equipment, and the Division set up a disposal buying and selling section for its members. The operation of this section produced the money used to purchase the Atchison Street property in 1960. With surplus funds the hall and basement area were soon added. Since then considerable development has occurred in the area with several highrise buildings nearby.

Many new clubs had been formed in Sydney to cater for the needs of amateurs, as the Crows Nest location of the WIA was prohibitive to some.

The property was sold in 1982 and the headquarters of the Division moved to the present location at Parramatta. The old 14 was demolished and in its place a three story structure similar in concept to that which existed at number 16. In early 1985 the remaining old properties on the railway side of 14 (#6 to 12) are in the stage of being demolished, no doubt for a high rise. One of these old properties was where the "Dick Smith" chain had its first retail outlet.



THE OLD ATCHISON STREET PROPERTY

EDUCATION

The Division has for many years been heavily involved in education with personal classes. For twenty years the Correspondence Course has helped thousands both in Australia and overseas to join the amateur ranks. The Division pioneered the CW practice format and still conducts nightly on-air Morse training. To supplement this HF session one of the Sydney clubs developed a continuous transmission VHF Morse training facility which utilizes a microprocessor for programme control. To cater for training the younger members of our community the Youth Radio Scheme came into being during the 60s. With the explosion for knowledge during the mid-1970s the YRS expanded to become the Division's Education Service, who have since published several books to help intending amateurs with studies.

EMERGENCIES

The Division has an active WICEN facility at the moment. Over the years it has had its ups and downs. The Amateur Radio Service has always been available in times of communication needs. This Division's WICEN has become recognised by our State's authorities as a trained, reliable reserve communication facility.

ALWAYS CHANGING

Amateur radio is always changing, new modes, new equipment, but perhaps the area which technically altered amateur radio the most in recent times was the granting of permission in 1968 for VHF repeaters. VK2, considered at times by other States to be out of step, has always been in the middle of band planning (??) and utilization of more channels than most of the other areas put together. We cannot help it if they did not smooth off the hills when "they" made the place. (It's always "they" who did it.) Also in 1968 the Division hosted, during the Federal Convention held at Atchison Street, the formation of the Region 3 section of the IARU.

The 70s saw the introduction of the third class of amateur licence — the Novice — and VK2 quickly took the lead in numbers. Only now in ratio are other areas catching up. VK2 now has a little over one-third of the nation's amateur population. This number has expanded the QSL bureau from a few cards a week to a thousand plus a day.

MOVING BUREAU

The VK2 Bureau has had many homes in Sydney. During the 50s it shared space between the bottles in the late Jim Corbin VK2YC chemist shop at Eastlakes. It then spent some years with various other Sydney amateurs as well as a time at Atchison Street. It next found a home in Newcastle for many years with the Hunter Branch before a brief trip back to Atchison Street. It finally returned to Newcastle where it is today under the guidance of the Westlakes Amateur Radio Club. *(See item elsewhere this issue.)*

Expansion of the scale of the last few years means that we no longer know everybody and the Institute may appear to some to have become a little distant or impersonal. The last decade has seen the great expansion of interest in radio spectrum utilization by others, and the Division has done what it could to knock on the doors of the government to put the amateur case. And what of the 80s?

THE LAST FIVE YEARS

The last five years has seen a direction change for the Division. A new 'Constitution' was introduced in the latter part of the 70's. It was felt that the monthly meeting — in a capital city — did not enable all members access to decision making, so they were replaced by club affiliation with the Division. This concept is for these clubs to provide representation for members through the club. Delegates from the clubs meet twice a year in a "Conference of Clubs". The Constitution changes were not without their hassles. An interpretation of a meaning of one part ended up being resolved in a Court of Law.

An ever increasing range of amateur equipment enabled one to become easily involved in any facet of the hobby. Computers are a rapidly increasing electronic hobby facility in the 80's and have many applications in todays equipment. Also the computer integrates with amateur radio, none more so than the 'packet radio' systems which are just starting in this country.

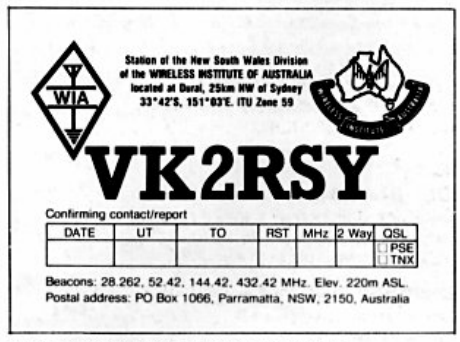
HEADQUARTERS

For over 20 years the Division had maintained a headquarters at Crows Nest. During that time Sydney grew and spread in the only direction it could — west. Faced with a changed role and a building in need of ultimate redevelopment, the membership decided it was time to move. In 1982, Crows Nest was sold and after looking at several Parramatta area properties, 109 Wigram Street was purchased. This is a new building of two levels. The ground floor contains car parking with access from a side lane, toilets and a small office, which has been rented out. The upper floor is the NSW Headquarters. There is an office and storage facilities but the majority of the area is devoted to an open members' lounge/library. While monthly meetings are no longer held, there is sufficient space to hold functions like the Seminar last year (see page 18, November AR). The building was officially opened by The Honourable Gary Punch, MHR, Member for Barton, on 28th May 1983. This months AR cover features the front of the building, named 'Amateur Radio House'.

Photograph courtesy Les Pall VK2KCP.

REPEATERS

Expansion of the Divisions technical facilities has continued at VK2WI — Dural (see AR, May 82). There is an extensive range of transmitters for the two Sunday broadcasts. The beacon installation has continued to be expanded (VK2RSY) from 10 metres on HF, 6 and 2 metres on VHF and 70 cm on UHF. Work is underway for 23 cm and will continue into the higher frequencies as circumstances permit. While some Divisions have largely provided all their States' repeater facilities, most of the VK2 fifty odd systems have been set up by local clubs and groups. The Division has VK2RWI at Dural on 7000 and 8525. WICEN has established VK2RWS on 7150 and 8275. To date VK2 have not ventured into 6 metre repeaters, but this is to change with a joint venture between WICEN and the Dural committee.



REPEATER ABUSE DEALT WITH

The 80's have unfortunately seen some changes in societies attitude and behavioural patterns. Sydney in particular has just been through a period of repeater abuse, most frequently on VK2RWI 7000. The authorities, despite the difficulties the old act presented, have located and prosecuted several offenders. Last January, one offender was jailed for some of these offences. There are more cases pending.

ONGOING EDUCATION

Educating the new generation of amateurs is an ongoing function of everybody. Many clubs have and still do conduct a range of courses. While at Atchison

Street the Division, under the guidance of Cec VK2IR, conducted an annual personal class as well as the Correspondence Course which hundreds, maybe thousands of amateurs have utilised over the years. The Correspondence Course continues today, with both a full theory as well as a Novice bridging section. For perhaps even more years, various members have provided nightly on air Morse training on 80 metres through VK2BWI, which is followed by the VK5 session. The Hornsby and District ARC some years ago, combined computers and amateur radio and produced an automatic Morse sender — VK2RCW — on 2 metres. At present attempts are being made to extend the facility to HF.

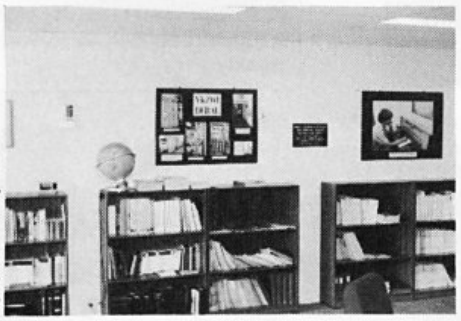
THE FUTURE

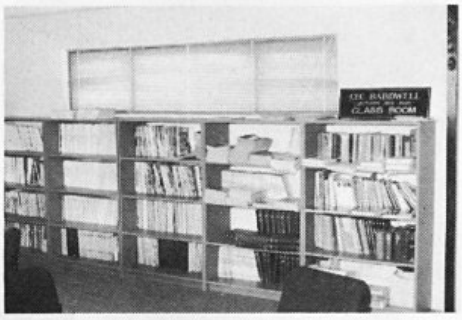
Roger Harrison VK2ZTB speaking at last years Seminar, used as his theme the possible development of amateur radio for the remainder of this century. While Roger predicted that we would all end up with more leisure time, it seems that the requirements to conduct the affairs of the Division are becoming more complex and demanding. Circumstances have made the workload of Council and its other office bearers rather less than enjoyable at times. Many spend a lot of time in travel and this and other costs mount up by the end of a year, all coming from his pocket as he serves his fellow amateurs. This should not deter everybody from doing their bit from time to time, for it provides an insight into the affairs of the Division and the Institute as a whole.

TIME CAPSULE

Recording and retaining history is hard. Todays papers are tomorrows rubbish but next years forgotten information. As part of the Division's celebrations a *Time Capsule* is to be started on 10th March at Dural. Throughout the year it will be added to and then sealed on 11th March next year. We intend that it remain sealed until 11th March 2010. A range of Divisional material will be included. Members are being invited to submit one of their QSL cards for inclusion. It will be interesting for the Institute's members during the centenary to have a year of history already there for the 'reading'.

It is an important year ahead for all members of the Institute and the Amateur Radio Service in general. During this year there will be further articles from VK2 as well as all other Divisions. Read again this monthly 'Editorial' by Jeff VK2BYY. At regular intervals the Division will hold functions to commemorate the year. Divisonal Council and its office bearers look forward to meeting you at one of them, so do come along and join in where practical and celebrate entry into the last quarter of the Institute's first century. **AR**





Photographs courtesy Les Pall VK2KCP.

Internal views of the VK2 Library.

A DIRECTORY OF SOME VK2 SERVICES AVAILABLE

DIVISIONAL OFFICE

Amateur Radio House, 1st floor, 109 Wigram Street, Parramatta. Postal — PO Box 1066, Parramatta, NSW 2150. Phone (02) 689 2417 Office hours 11 am to 2 pm. Mon to Fri Wed evening 7 to 9 pm.

BROADCASTS AND DIVISIONAL STATION

VK2WI — 63 Quarry Road, Dural. Phone (02) 651 1489 Broadcasts 11 am and 7.30 pm (local time) Sunday. HF: 1.825, 3.595, 7.146 and 28.320 MHz. VHF: 52.120, 52.525 and 144.120 MHz and several relays are made to both HF and repeaters by arrangements with local clubs. Beacons: VK2RSY on 28.262, 52.420, 144.420 and 432.420 MHz. Repeaters: VK2RWI on 7000 and 8525.

QSL BUREAU

Conducted on behalf of the Division by the Westlakes Amateur Radio Club. Postal — PO Box 73, Teralba, NSW 2284. Phone (049) 58 1588.

CORRESPONDENCE COURSE

Details from Divisional Office at PO Box 1066, Parramatta, NSW 2150.

EDUCATION SERVICE

A range of publications written in recent years by members of the Education Service, to aid those studying for a licence. Inquiries via the Divisional Office (as above).

MORSE TRAINING

Nightly sessions on 3.550 MHz under the call VK2BWI. In Sydney, HADARC maintains VK2RCW, an automatic various speed transmission on 147.400 MHz.

DIVISIONAL LIBRARY

An extensive range of magazines and reference books are maintained at the Divisional Office.

WICEN

A state group as part of the Institute's role of personnel available to supplement communications in times of overload or breakdown in other authorities systems. Information from the Divisional Office or PO Box 154, Roseville NSW 2069. WICEN maintains repeaters VK2RWS 7150 and 8275. Training courses are periodically held in Sydney and country regions.

AFFILIATED CLUBS

Many clubs have become affiliated with the Division, as outlined in the Constitution, to provide a local liaison point for Members of the Institute. Conferences are held twice a year.

AWARDS

The Division does not currently have any awards. There are several available from VK2 groups and details may be found on page 164 of the 1984/85 Call Book.

INTRUDER WATCH

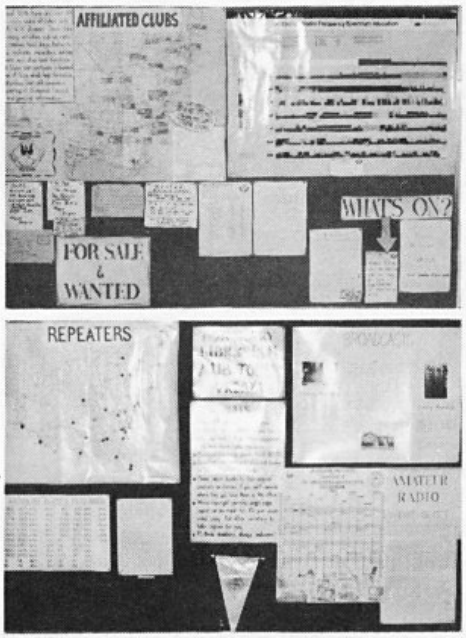
A small active team look after the VK2 region. More personnel are required for the team. Details from the office.

PUBLICATIONS AND SMALL COMPONENT SERVICE

The Divisional Office has a range of amateur publications. In addition there is a small range of components. Space precludes the handling of a large range. Visit or call the office for details.

STOLEN EQUIPMENT REGISTER

For those who have the misfortune to have equipment stolen, the Division (as do others — the Federal office maintains a central register which is regularly published in AR) maintains a file which can aid those checking on possible purchases. Stolen items reports are included in the Sunday morning broadcasts.



Photographs courtesy Les Pall VK2KCP.

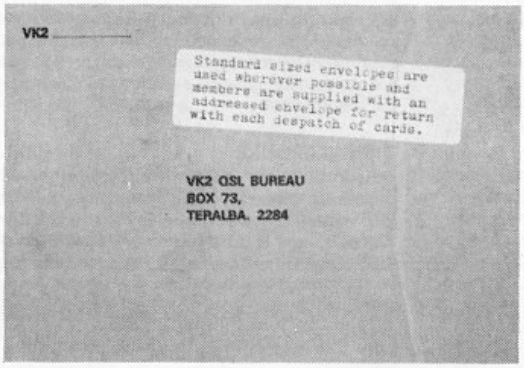
Display Boards at 109 Wigram Street, Parramatta.

VIDEO TAPE LIBRARY

A range of the material available from the Federal Videotape facilities is maintained at the office in the VHF and Beta formats for club and member borrowing.

AR

A PICTURESQUE LOOK A



1 Keith VK2AKX keeps a writte and outwards even though the co instant recall. 2 Cards for members letters in sorting racks. 3 Most da busy. 4 The open drawers show so cards. 5 The computer keeps all r programme by Milton VK2DCW general work area. 7 The plastic sa overseas and some heavy local p own individual file. Arthur VK4PK packets are wrapped and sealed computer generated label affixe frequent despatch. High volume t weekly.

A PICTURESQUE LOOK AT THE VK2 QSL BUREAU


1

1 Keith VK2AKX keeps a written record of all cards, both inwards and outwards even though the computer keeps a tally available for instant recall. 2 Cards for members are sorted into first and subsequent letters in sorting racks. 3 Most days at least four volunteers are kept busy. 4 The open drawers show some of the thousands of uncollected cards. 5 The computer keeps all records on disc. A custom prepared programme by Milton VK2DCW keeps track of 4,000 files. 6 The general work area. 7 The plastic sealing machine used for wrapping all overseas and some heavy local postings. 8 Every member has their own individual file. Arthur VK4PNK checks the "P" file. 9 Overseas packets are wrapped and sealed in plastic bags before having a computer generated label affixed. 10 All DX cards are sorted for frequent despatch. High volume bureaus, like JA and UA are cleared weekly.


7


2


5


6


9


3

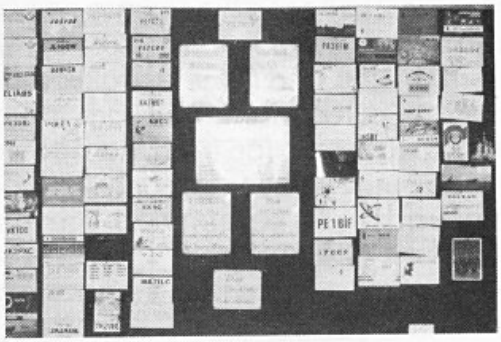

4

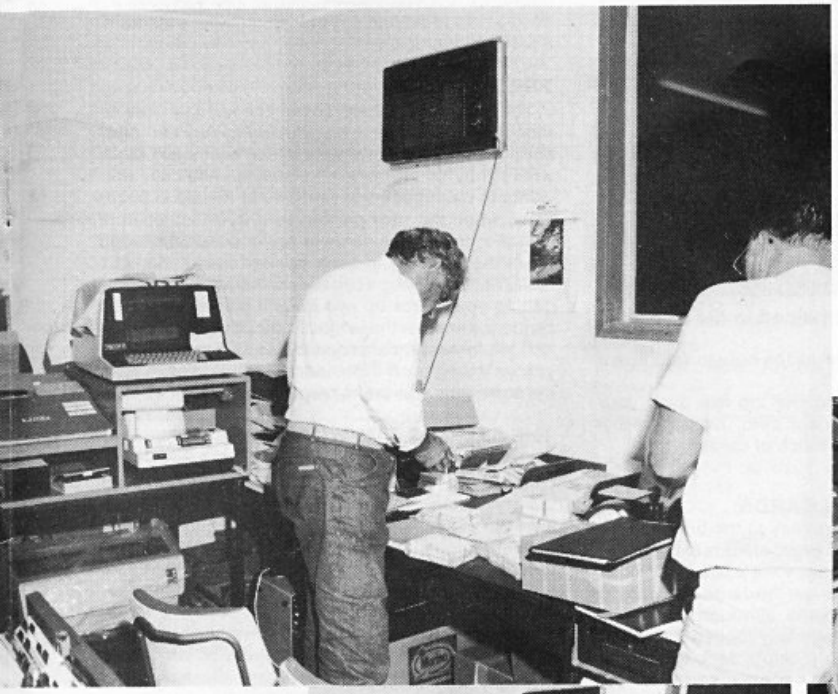

8

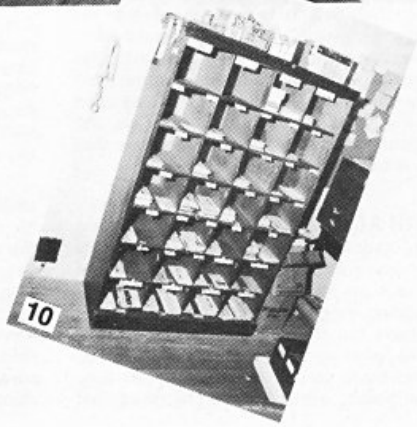

10

nT THE VK2 QSL BUREAU

en record of all cards, both inwards computer keeps a tally available for s are sorted into first and subsequent ays at least four volunteers are kept ome of the thousands of uncollected records on disc. A custom prepared keeps track of 4,000 files. 6 The ealing machine used for wrapping all postings. 8 Every member has their NK checks the "P" file. 9 Overseas d in plastic bags before having a ed. 10 All DX cards are sorted for bureaus, like JA and UA are cleared







A MEMO FROM THE VK2 QSL BUREAU

With some 5000 callsigns in the VK2 call area a percentage of these belong to active DX type persons who make full use of the QSL Bureau. There are others who DX, may not be interested in QSLing and forget to tell the overseas contact accordingly, so become recipient of cards. Then there are the cards which just seem to arrive and the bureau has no instruction from the addressee as to what action is required. A card takes up some space and only so many will fit into a bureau, so in due course its destiny has to be determined. The message from this is every amateur, regardless of their QSLing habits should keep their bureau advised on card handling requirements and callsign changes should they occur.

Notification forms are available from both the VK2 Divisional office and the VK2 Bureau, but if not to hand just write to them and the details will be upgraded in the computer. You may prefer to ring the bureau answering machine on (049) 58 1588 and tell it everything in 30 seconds.

The VK2 Bureau is operated on behalf of the Division by members of the Westlakes Amateur Radio Club from their club rooms located in the Newcastle suburb of Teralba. Needless to say the bureau is the biggest customer of the local Post Office facility.

Phil VK2JPC on behalf of the VK2 Bureau, would like to remind all bureau users of a few points many which apply to other bureaus. The facilities are available to any amateur within VK2 whether a member or non member of the Division. Full details and requirements may be obtained from the Divisional office or the bureau. Check also with your local club since many have a handling arrangement with the bureau. Interstate readers are encouraged to read on but as there may be some slight differences with your bureau please check with them should you be unsure of their requirements.

Now here are the comments from Phil:

Members now report few problems with the operation of the bureau. There are however some difficulties which are best explained in detail.

CHANGES OF CALLSIGN:

Unless a change of callsign is notified to the Divisional Office, which then reports the change to the bureau, there is no way that the bureau knows of a callsign alteration. When a callsign is changed, a note to the Parramatta office will be sufficient to alert both the Federal Office and the bureau, both the new and old callsigns together with the date of changeover need to be notified.

The most frustating situation occurs however when a callsign is cancelled and immediately reissued by the DOC. This leads to all kinds of administrative problems in the bureau. It is just impossible for sorting staff to know that a QSL is for either the "old" or "new" holder. What is more, the new callsign holder is frequently unaware that the call has ever been used before and the old callsign holder that it will be used again. Until the DOC amends this practice, the problem will continue to arise. Please remember that the confusion is not the fault of the bureau.

OVERDRAWN ACCOUNTS:

The bureau computer is set to exclude all accounts which are overdrawn. No "final notice" or anything of this kind is sent to the member as a reminder. However, a posting which will result in an overdrawn account will have the callsign and balance "highlighted" on the label as a reminder. If this is disregarded — no more cards. It's as simple as that. Every debt incurred by a member is a charge against the membership in general as the bureau works on a non profit basis.

Sorted QSL cards are placed in file drawers.

Please check your label, the top line gives your current balance. If it is near zero, please send a remittance with your next batch of cards.

MONEY SENT WITH CARDS:

The best ways to remit money to the bureau is by cheque or money order however stamps may also be used. Whatever method of payment is used, please *do not put* the remittance *amongst the cards.* The bureau is not a one man operation and, although all receipts of cards and money are carefully logged a stack of cards is sent on from the receipts desk to sorters. Imagine the confusion when a cheque, some stamps, or even a money order falls to the floor as a group of cards is picked up. There is no knowing where it may have come from.

Please pin or otherwise affix your remittance to a slip of paper bearing your callsign and the amount enclosed.

SAVING POSTAGE:

It is amazing how many members overcharge themselves when sending cards to the bureau.

The "steps" for charging are:

standard article (bureau sized envelope which will pass through the Australia Post gauge)

100g; 250g and 500g.

Above 500g mass the parcel rates apply and it is always cheaper to send 2 x 500g packets than a 1 x 1kg parcel!

Unsuspecting members extrapolate this theory to small mass packets *and it doesn't work.* It is definitely not cheaper to send 2 x 100g packets than 1 x 200g! Nor any other combination either. It is very worthwhile using the kitchen scales to get your cards as close as possible to the 100g, 250g or 500g steps if the despatch is more than about 16 cards (standard). But, don't make the mistake of trying to cheat Australia Post because the sorters in the Newcastle exchange are extremely vigilant and all over mass or non standard packets are taxed at *double* the deficiency. This tax is passed on to the bureau and, yes, you've guessed it — the tax paid is debited against the member's account. It just isn't worth it.

PRE SORTING:

The volunteer sorters at the bureau just love to receive 500g packets of cards in *logbook* order. After sorting a few, the rest are put in the "sort later" stack where they could remain for weeks. After all, who wants to dash back and forth along the DX pigeonholes when the next packet, sent by a considerate amateur, has all the cards in *prefix* order. Although some members band each callsign prefix this isn't really necessary but it certainly speeds the process of getting your cards up and away if they are in prefix sequence and, for those most difficult of all cards, the "W" lot, in numerical sequence as well. It won't take you very long but if it isn't done it will at least double the sorting time at the bureau.

THE FAMOUS FIVE WORDS RULE:

The old story about "no more than five words" on a card is a myth — via the bureau anyway. If you want the whole story, drop a line to the bureau and you can have a copy of the postal regulations — free!

Briefly, you can write all you like on the QSL but, here's the strange thing. Try to send this card as a "postcard" or "greeting card" singly to a DX address and you'll discover that it costs just like a letter. Through the bureau — in bulk, no problem but please *don't* send sealed letters for transmission with cards in bulk. This definitely contravenes Universal Postal Union rules.

If you don't know the address of a DX contact and you want to send the letter sealed, the bureau will find the address for you if it is held at the bureau and send it as a single letter, air mail or surface as directed by the member.

NEW POSTAL CHARGES

The new postal charges are programmed in the bureau computer and will be adjusted automatically. There is no need for members to take any action. There will be a minor service charge adjustment also because of an increase in stationery costs. Full details are available on request. A standard article gauge and a rate card will be sent on request. Extracts from the postal regulations as they apply to QSL cards are available on request. A complete printout of a member's bureau listing is available. Bureau standard pre-addressed envelopes and self adhesive labels are available for a small charge. A standard envelope is sent with each posting but if you require more, just ask. Of course they are not free.

Finally, if you are interested in economics, can you imagine how far you can drive your car or travel by train or bus for 33c? Sending and collecting cards by post has got to be cheaper than any other way.

For "Via the Bureau" service:

Box 73, TERALBA. 2284

AR

SPECIAL EVENTS FOR 1985 IN VK2

10th March

The closest weekend to the formation date. There is to be an informal gathering at VK2WI Dural. Meet after the morning broadcast and partake in the monthly barbeque (bring your own basis.) At 2 pm a short ceremony will be held with a 'Time Capsule'. It is planned to start the Time Capsule on this day and hold it open for a year. It will then be sealed, to be opened again on 11th March 2010. During the year it will have added to it Divisional material of happenings during the year. On the 10th we invite all members to take part by submitting their QSL card for inclusion. Include on your card information like the date you obtained your call, together with calls held, etc. If you live within the metropolitan and surrounding area, attend in person or have someone bring it along for you. For those living further out in the country, you can post it to — Time Capsule, PO Box 1066, Parramatta, NSW 2150. On the back of the envelope name and callsign/s. Do not include any normal mail matters or it may be a while until you receive a reply. If there is not room on the card for all you might like to include, enclose further information on a sheet of paper, attached to the card, pertaining to yourself and activities within amateur radio. Clubs and groups are also invited to supply material about their organisation. Material will be date stamped on the day. 11th March starts the years activities and a lot will happen before 11 March 1986 arrives. Material will continue to be collected during the year.

10th March

The Division is managing the 75th Anniversary CW Contest on behalf of the Institute — rules published in the January issue of AR.

17/18th March

State Fox Hunting Championship hosted by the Orange Amateur Radio Club, PO Box 1065, Orange, NSW 2800. Programme and details on receipt of an SAE. 80 metres, 10 metres and 2 metres. National championships will be conducted by the VK1 Division later in the year.

30th March

Annual General Meeting at 2 pm. A separate posting is being made to members with annual report, accounts and matters relative to an AGM.

Easter 85

Urunga Field Day weekend on the North Coast. No details where to hand as these notes were prepared. Details via Sunday morning broadcasts when available.

13/14th April

Conference of Clubs to be held at Amateur Radio House, Parramatta. Discussion includes club submitted as well as the Federal Agenda items. Details will appear on early items in AR, later ones via broadcasts and copies will be sent to affiliated clubs. Check with them for details.

13th April Evening — Dural

Annual fireworks night at VK2WI. Details will appear in April AR. There will be limited catering available on the grounds. Bring family and friends. Conditional on fire restrictions at the time, it should be the first fire works display for the year rather than being one of many in June.

26/28th April

Melbourne Federal Convention. Members or groups with items for discussion please arrange that they arrive at the Divisional Office by mid March for checking and submission.

25th May (tentative)

Seminar. Four speakers on a range of topics.

8/9th June

Port Macquarie. Annual field day. Programme to follow.

Photograph courtesy Ken McLachlan VK3AH.

22nd June (tentative) Sydney

75th Anniversary Dinner and associated events.

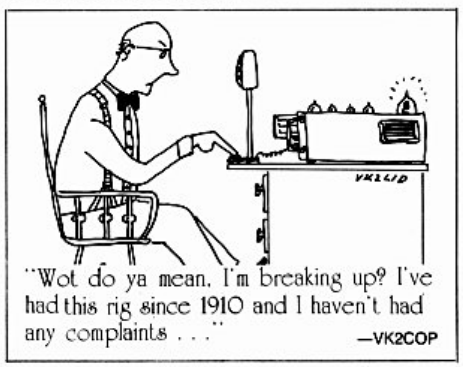
5/6th October

Wagga Wagga. South West Zone Convention.

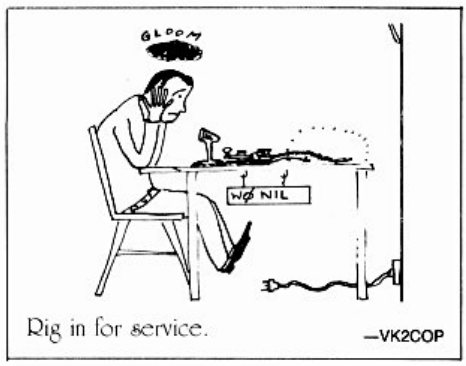
Clubs and groups with coming events, field days etc, please send details early (at least three months) for publication. Later items will only receive broadcast coverage.

The input to the next Callbook will be closing soon. Clubs, groups and amateurs should check the current listings and submit any changes required. Remember that callsign listings are taken from the Department of Communications records, so adjust records with them and send a copy to the Federal Office so they may update their records.

AR



"Wot do ya mean, I'm breaking up? I've had this rig since 1910 and I haven't had any complaints . . ." —VK2COP



BEACONS in VK2

The Division maintains a beacon network at VK2WI — Dural. Currently there are four bands with 23 cm under construction. Additional UHF/microwave bands will be added as circumstances permit. Help is required in their construction. Contact the Beacon Officer, John Marshall VK2EGI with any offers of assistance. In addition there are 6 metre beacons at Gunnedah and Newcastle sponsored by local clubs. VK2RSY run constant carrier with identification every 30 seconds. Due to broadcast requirements they are turned off at 10.45 am and 7.15 pm Sundays for 1½ hours.

2 metres 144.420 MHz. 2 stacked Horizontal Crossed Dipoles at 15 m 20 watts FSK.

10 metres. 28.262 MHz. Vertical ¼ wave at 20 metres. 25 watts Keyed carrier (not FSK).

23 cm 1296.420 MHz. Under construction.

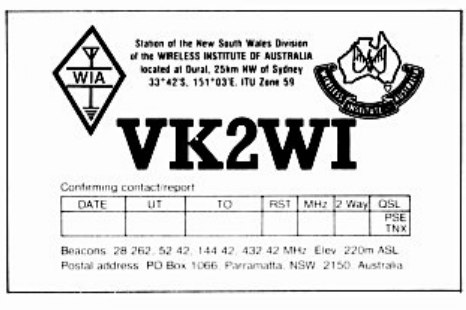
6 metres 52.425 MHz. VK2RGB — Gunnedah.

23 cm Planned Central Coast.

6 metres 52.420 MHz. Horizontal Crossed Dipoles at 14 m 40 watts FSK.

70 cm 432.420 MHz. 2 Stacked Horizontal Crossed Dipoles at 16 m above ground 15 watts FSK.

6 metres 52.320 MHz. VK2RHV — Newcastle.



There is one allocation left for a 6 metre beacon, in addition to all our Ch 0 TV systems in VK2. Three each at 2 metres and 70 cm and two at 23 cm. Any clubs or groups with an interest in establishing a beacon should contact the State Repeater Committee. There are no additional 10 metre allocations as these are part of a world wide system. The Australian 10 metre beacon allocation is the block from 28.260 to 28.270 MHz inclusive.

AR

REPEATERS — Friend or Foe!

Tim Mills VK2ZTM
PO Box 204, Willoughby, NSW, 2068.

It is one third of the Institute's life span since I first found myself the owner of a black or was it silver box, in the form of a low band TCA unit which had seen better days in a taxi. Having watched the FM scene ever since through conversions to the desired band, then simplex, repeater permission, planning, disagreements, going it alone and back with the majority (?) I would like to take every amateur through the evolution of Australia's development of today's facilities before some of the events become history that failed to be recorded. Many of the accounts detailed will be as I saw them but I do ask everyone to join in with a contribution of an event they feel should be part of the recorded history. A line to me at the above address would be most welcome.

Many of the newer (and perhaps older) amateurs may take for granted the facilities that repeaters offer without a thought of how or when they came into existence, both in terms of permission as well as their physical installation.

FM is not new but the first general form of modulation used was AM. In the late 40s it appears the first general useage FM commercial mobiles in this country came into service on the 70 MHZ band for general use. These took the form of large valve units, often in several boxes, transmitter — receiver — vibrator power supply to fill the boot of even the largest car of the day, which in turn rapidly drained its 6 volt battery. The base stations were even bigger, often a 2 metre high rack cabinet with a .25 kW output. The channel spacing of the day was 240 kHz. During the same period amateurs intentionally experimented with FM, usually in the narrow mode, or unintentionally when their supposed stable transmissions weren't and the local amateur advisory committee sent them a 'blue' — please explain/correct memo!

By the late 50s the commercial network had expanded and the 240 kHz channel spacing had been halved to 120 and then again to 60 kHz. While predominantly FM, there were a few AM services. (The Aviation industry was and in most cases still today is an AM service in the 108/136 region.) Equipment design became smaller and one usually saw it in taxis so it acquired the "Taxiradio" handle. In those days there was more room under the the dashboard and the taxi operator's radio was installed in most cases, under the fare meter. The radio — valve era — produced heat, the fare meter was well lubricated in oil so when one obtained a 'taxiradio' from disposals there was no doubting the previous owner. In another episode I will relate the story of cleaning 'these things' to an 'as new' state. Early 60s saw a few units appear on the surplus market. Amateurs — being what they were (or are) — acquired these and moved them to either of the VHF bands at 6 or 2 metres.

The first unit I had was a low band (70 MHz) unit and going to 2 metres (high band) was a case of physically moving the multiplier coil cans down one position and fitting a 4 MHz crystal in place of the original 2 MHz one. In those days operation was simplex and limited planning required. Most aimed for the centre of the band, 146 MHz. For reasons now starting to be lost in the past — some say it was the slide rules of the day —the era between where one had to use the brain controlled long hand calculations and today's pocket calculator — no two groups ended up on the same frequency.

VK3 it is thought aimed for 146.000 but ended up 146 kHz low on 145.854 which became known as channel 'A'. VK2 found their way to 146.000. To compliment 145.854 on the low side, VK3 balanced it on the high side at 146.146. This channel group became known as channels A, B and C. In the mid 60s, VK2 started to obtain some further equipment from a source and that group headed for a common channel and ended up on 146.100.

During the 50s, the 50 MHz region had the old 5 metres, 56 to 60, destined to become channel 1 TV and the newly acquired 6 metre band. This period was a good time for DX on the CW and AM modes. A few of the FM units found their way down to these bands. An easy conversion usually was to squash a coil here, perhaps wind another, or add a capacitor for the transmitter conversion. A similar crystal line up and you had some RF out. The receiver usually meant a bit of front end realignment and running the crystal oscillator injection on the other side of the 10.7 MHz IF chain. Commercially it may have been multiplied up to 60 + 10.7 for a 70 MHz frequency. Amateur wise it was still at 60 but — 10.7 to 50 MHz. While many crystal locked systems developed along the (to the amateurs involved) logic, *"I have a crystal, lets use it"*, some did follow international useage. 52.525 was one such case. Popular almost where ever 6 metres was allowed, it was even used by Radio China as a broadcast link — at least one knew where the band was open to when you heard it.

6 metres has never developed to the extent of 2 metres in VK2. While interstate it was very popular in the 50s and early 60s some well placed Ch 0 TV stations at regular skip distances in major activity centres like Melbourne and Brisbane soon killed off the then high usage. There were more AM than FM net frequencies.

These included (AM) 53.032; 53.035; 53.100; 53.866 and 53.982. On FM there was 52.525; 52.656 in VK6. and 52.700 and 53.950 in VK2. Before this era fades into unrecorded history I would like to log those frequencies so if you had a small (or large) club or group net on 6 metres drop a line to the above address and tell me about it, your location and what equipment you generally used.

Mid 60s found that the commercial spectrum had become so crowded that a major change was planned. Channel spacing was to be reduced to 30 KHz and new equipment specifications introduced. This obsoleted a vast range of — in many cases — modern two way units onto an eager amateur market and whether we like it or not the 'net channel' era began. Now you could leave a squelched (muted) radio running to listen to whoever was about — no more tuning and perhaps missing a snippet of gossip . . . oops I meant news. (Squelch was the term printed under the knob if it was an AM set, Mute if it was FM.) Most people had a single channel unit, some had a 3 channel set, but you had to know someone for the occasional 6 channel unit.

The amateurs became restless, the systems were good. VK2 units were often high power 25 watts to combat Sydneys terrain. Melbourne needed less power so there were many popular 6 watt units. This was still not enough. Those in high locations talked to the world. Somewhat naturally but not necessarily with permission they started repeater experiments. One I became aware of had found a nice high 'country' hill. From the same building, without refinements of things like filters, two units and two aerials appeared. With an input on ch 'B' and the output on 'A' — a mere 146 kHz spacing it worked well. However, a mix between a couple of local services nearby produced a signal on ch 'B' so the input was moved to a 146.100 frequency, which was to have a significant bearing on later repeater channel planning.

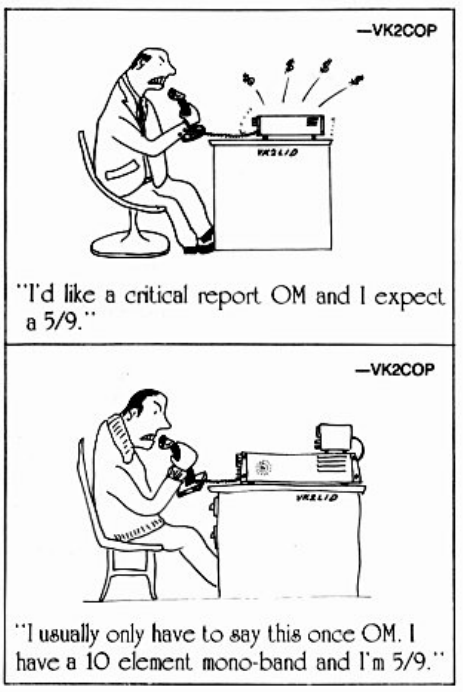
The "experimental" system was a 'well kept secret'. Some years later, during the course of discussion on repeater licensing, I had an occasion to ask if the authorities were ever aware of its existence. *"Oh yes, about 24 hours after it first went to air"* was the reply. Then followed a detailed discription which indicated they had come to know it on a better than a casual basis. I do believe that this and 'other' experiments helped show that the amateurs could handle repeaters for, when approval was granted, Australia received the then and I still believe the best set of operating conditions (from the repeater committees' point of view) in the world.

That permission came to our notice in VK2 on the first Friday in July 1968 when our Federal Councillor, Pierce VK2APQ attended the VHF and TV Group meeting to tell us the good news.

Well we had permission but no plans, it was all such a surprise. In a short space of time agreement nationally was reached to hold a planning meeting. The location was to be at Wodonga on the VK2/3 border during September 1968.

To be continued.

AR



DURAL REPEATERS

The Wireless Institute of Australia NSW Division operates repeaters in the 2 metre and 70 centimetre bands from its Dural site, under the callsign VK2RWI. This short article describes the operation of these repeaters.

General Information	2 metre	70 centimetre
Output frequency	*147.0 MHz*	*438.525 MHz*
Input frequency	*146.4 MHz*	*433.525 MHz*
Output power	*35 W*	*10 W*
Antenna gain	*10 dBi*	*8 dBi*
Antenna pattern	*Cardioid (max south)*	*Omni*

CONTROL FUNCTIONS

Both repeaters are controlled by a central microprocessor and operate as follows:

Tail: Normally 0.6 seconds, but extended to 1.2 seconds on weak signals.

Timeout: 3.5 minutes. Timeout is indicated by a 1 kHz tone transmitted for one second. This tone, preceded by an ident, is sent every two minutes while the repeater is timed out. When the incoming transmission ceases, the repeater sends a "raspberry" followed by an ident. Note that the timer resets at the end of the tail, so allow the repeater to drop out fully between overs. Timeout is inhibited automatically at broadcast times, and may also be manually inhibited at other times, and this mode is indicated by a short 1 kHz tone burst at the end of the tail. Timeout is reduced to 20 seconds when the battery voltage is low.

Anti-button-push: All incoming transmissions are checked for modulation content. After four transmissions lacking suitable modulation the repeater shuts down. This is reset on receipt of a suitably modulated transmission — the recommended procedure is to announce your call sign. Note that button-pushing, as well as being annoying to those listening, contravenes the regulations relating to identification of transmissions, ie. DON'T!

Off-frequency indicator: Transmissions more than 2 kHz off frequency receive a tone during the tail — a high tone (1.6 kHz) meaning high in frequency and a low tone (600 Hz) meaning low in frequency. This function is disabled when the timeout inhibit mode is activated, as a result of abuse during broadcast callbacks.

Low power (2 m only): When switched to low power mode (10 W), the callsign is sent using 600 Hz instead of the normal 1 kHz tone.

Faults: The performance of the repeaters is continually monitored, and abnormal operation of the power supply or transmitter is indicated by a "B" (for battery) or "F" (for fault) respectively being sent at 80 second intervals. The pitch of the tone used indicates the nature of the condition, as in Table 1.

Maintenance: These repeaters are maintained by the WIA Dural Committee, and extensive remote control and telemetry facilities have been provided for this purpose. Note that maintenance and testing operations have priority over normal use (other than emergency traffic). Routine maintenance includes battery cycling several times each year.

AR

	600 Hz	*1 kHz*	*1.6 kHz*
Power Supply ("B")	*Low voltage*	*Mains failure*	*Bat charging*
Transmitter ("F")	*Low output*	*High TX current*	*High SWR*

TABLE 1

A HISTORY OF SOS

G Maxwell Hull, VK3ZS
Federal Historian

During World War II in 1940 dispatches from the war zone reported that "SSSS" was rivalling "SOS" as the maritime operators call of distress. If it was fact at the time, the former was not internationally recognised as was the "SOS" signal in the International Morse Code.

In any event, the "SSSS" did not officially mean "Submarine Sighted" or any other words beginning with "S". The explanation was that the dot-dot-dot four times repeated (... ... ...) representing these letters, has a characteristic swing and through common understanding and usage identified the nature of the distress case.

"SOS" does not mean literally "Save Our Souls" or "Save Our Ship" as is sometimes claimed, and more than a previous international distress call "CQD" meant "Come Quick Danger". All such calls are based on the speed and clarity with which they can be transmitted.

There was no special wireless call for sea emergency prior to the turn of the century, according to Federal Communication Records. About that time the Marconi International Marine Company Ltd began equipping ships for radio telegraph communication. In doing so it adopted "CQ", which had been in use in wire telegraph as a "general call" for many years, as a precedence signal for any ship desiring to communicate with another ship or shore station.

The need for a common distress call was recognised at the preliminary International Radio Conference held at Berlin in 1903. Here the Italian delegation suggested that in emergency a ship should send at intervals the signal "SSSDDD". No action was taken at this conference.

In 1904 the British Marconi Company instructed its ship radio stations to substitute "CD" for "CQ". Subsequently, the "D" was substituted in the old "CQ" call. At the 1906 International Radio Conference at Berlin, however, "SOS" was formally adopted. This combination was the outgrowth of "SOE" (... ———— .) which had been used by German ships but which was somewhat unsatisfactory because the final dot was easily obliterated by interference.

Even so, "CQD" was so firmly established with some operators that its use continued for some years thereafter. A notable example was its employment in summoning aid for the steamship "Republic" in 1909. "CQD" finally passed from the sea calls when the international conferences continued to approve "SOS".

From RADIO magazine, May 1940.

AR

INTERNATIONAL YOUTH YEAR

In 1979, the United Nations General Assembly, declared 1985 to be International Youth Year with the theme being "Participation, development and peace".

Let us, in our Seventy Fifth Anniversary Year", as the oldest radio society in the world also remember youth in their year.

May we encourage them to participate in the wonderful hobby of amateur radio and also help them to develop and further the particular facet of the hobby which claims their interest.

The youth of today are the OTs of tomorrow. **AR**

IT BEGAN 185 YEARS AGO

Alessandro Volta is the recognised founder of electrochemistry which has remained a major source of electricity.

The physicist experimenting in Italy developed the first electric cell in 1800 — his name has been given to the unit for electromotive force — the volt.

Although the phenomenon of electricity generation was not completely understood in those days Volta received full recognition for his discovery.

After demonstrating it to Napoleon, the French Emperor made him a count and senator of the Kingdom of Lombardy.

Later in 1815 the Emperor of Austria appointed Volta director of the philosophy faculty of the University of Padua.

Following on from Volta's work dry batteries were developed by Leclanche and rechargeable lead accumulators by Plante.

Without electrochemical cells there would be no portable radios or tape recorders, electrically powered vehicles, portable torches, heart pacemakers, electric watches and clocks, and even hydrogen fuel cells which power spacecraft. **AR**

HOW'S DX

Ken McLachlan, VK3AH
Box 39, Mooroolbark, Vic 3138

Well into the year and the sunspot activity is still declining, making contacts harder to get on the higher bands on which I normally operate. The signals are there, but not as strong and not as regular, so one has to work harder, improve their station efficiency and vary their techniques.

Of the times I have listened and monitored a rare station for a considerable time, it never ceases to amaze me the number of VKs that I can hear call and after a couple of calls, they give it away. On occasions I have called the station and alerted them to the fact that VKs are listening and calling. Invariably the called station will then look for the nominated station he or she has been advised of, work them and then seek other VKs.

Amateur radio is a hobby to share, and if I have the resources and luck to work a rare station, I am only too pleased to assist others and probably get as big a thrill out of seeing a newcomer or someone who wants it for a new country, get it, as the operator themselves. It is called sharing and from my point of view there could be a lot more of it heard across the amateur spectrum.

In my book, self satisfaction is directly proportional to what one receives in unsolicited personal rewards from what they do, to the amount of time, work or energy that they put into it.

MOUNT ATHOS

Nicola I0SNY, is still having trouble in organising the Mount Athos trip which was intended to be prior to Christmas 1984, but apparently documentation went astray.

As has been said many times SV/A is a very difficult area to gain accredited permission to operate from, and it all depends on the approval of the Council of Abbots which control the area.

Nicola is an experienced UHF orientated gentleman and in August last year established a 24 GHz record of 331 km, from Mount Epomeo on Ischia Island, off the coast of Naples, to Montalto in the Calabria region of Italy. (Refer QST December 1984, p69)

A late news item indicates that the group has the permission and the Easter Bunny could be hopping around while they are operating.

KERGUELEN

FT8XA is quite active on twenty metres. If you are lucky to catch up with him, QSL to F6FYD, Vannick Delatouche, P.O. Box 8, Andresy, France, F-78570.

DON'T FORGET CLIPPERTON

Due to be operational from 3rd to 10th April. More details next month.

ANTARCTICA

The station 4K1CEY, now QRT, was located at Molodezhnaya Base Antarctica, having co-ordinates of 67°S and 45°E which locates it in ITU Zone 69 and CQ Zone 39. QSL to UY5DJ via P.O. Box 88, Moscow or preferably via the Bureau.

PROFILE OF A MODERN DXER

Thirty eight year old Ghis ON5NT (affectionately known as "No Trouble") in nineteen years of operating has accomplished many amateur lifetime ambitions.

Ghis is on the ARRL DXCC Honour Roll and as at the end of 1984, whilst still awaiting the San Felix card his standings were Phone 310/309, Mixed 310/309, CW 306/305 and his figures of countries worked were Phone 325/324, Mixed 325/324 and the CW list was 311 worked with 310 confirmed.

Ghis' wanted list includes XZ, YA, ZA and 7O on both the Phone and Mixed sectors whilst on CW this very keen and astute operator needs A6, C9, XV, XZ, YA, ZA, 5A and 7O prefixes to capture a "full bag".

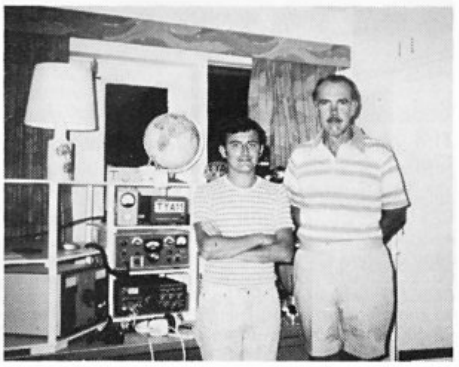
Awards have come his way also as he holds 5BWAC which was gained in 1977, 5BDXCC #487 (1976), 5BWAS #1022 (1982) and he worked and had confirmed the 200 contacts to achieve certificate #35 for 5 Band Worked all Zones also in 1982. Also Ghis proudly displays certificate number 7 for WAZ single band 80 metres SSB and WAZ single band CW on 40 metres, the certificate number is 16. It is a pity that 160 metre operation is not allowed in Belgium or there, I am sure, would be a certificate for that too.

The low bands score is swelling and forty metres has 288 worked with 286 confirmed, eighty metres follows closely with 246/244 on SSB/CW.

Not one to stand still, Ghis has operated 4U1ITU (1975), ON5NT/LX (1976), 10,000 QSOs from TYA11 in 1982, ON5NT/IT4 (1984) and ON5NT/HB0 also in 1984. He is also QSL Manager for a number of stations.

When one reflects on these accomplishments and considers all the hours including the seeing of innumerable sunrises for the low band contacts, any reader would have to agree that Ghis is a dedicated DXer.

Ghis is ably supported in his hobby by his charming XYL Monique and 11 and 7 year old daughters Maggy and Heidi.



Two famous DXers Ghis ON5NT (L) and Bull 9U5JB, presently US Ambassador in Burundi. The photo was taken in 1981 at the TYA11 QTH.

BURUNDI

Ghis ON5NT, hopes to be able to operate 9U5JB over the Easter period. Look on the usual DX frequencies and all QSLs to ON5NT.

NEW BEACON

Another beacon on twenty metres has been activated and will join 4U1UN/B, W6WX/B, KH6O/B, JA2IGY, 4X6TU/B, OH2B, CT3B and ZS6DN/B on 14.100 MHz. The beacon is HK4LR/B and will be operating in number nine time slot. Apart from a guide to propagation a QSL would be appreciated by the sponsors, the Northern California DX Club via W6RQ.

NO GUARANTEE

For those keen DXers who have still not received a card from Ron LU2AH, for AZ5ZA. Ron recommends that one QSL to Gorostiaga 2320, Buenos Aires 1426, Argentina may work as he comments that mail destined to him is being intercepted by a postal worker. Beware, there is no guarantee that you will still receive a card.

YEOVAL-YEOVIL

Joy VK2EBX, whose QTH is Yeoval and is a regular contributor to this column has received a beautiful certificate from the Yeovil Amateur Radio Club confirming her as an Honorary Life Member. Congratulations Joy, and I am sure it takes pride of place near the transceiver. (See page 43 — Nov AR).

MARION ISLAND

ZS2MI back on the air!!! It is believed that ZR6AOJ, has permission to operate ZS2MI for a fourteen month stint. All QSLs will be handled by ZS6BCR. Let us hope that this operation will be a success story as ZS2MI has not appeared in that many DXers logs, particularly VKs.

Marion Island, located nearly 2000 kilometres south-east of Capetown in the Indian Ocean, is the larger of the two islands of the South African dependent Prince Edward Island Group. This sub antarctic island, which is entirely volcanic, has an area of 390 square kilometres and its highest mountain is a dome like shape rising to Jan Smuts Peak, which is snow covered and has an elevation of 1190 metres. In a description of the island, QRZ DX Editor Bob Winn W5KNE, wrote, research has shown that the coastline is very rugged and exposed with steep cliffs rising to around the 150 metre mark.

Bob says, that the climate is cool, with a mean annual temperature of 4 degrees and the island is continually swept by gales which bring heavy rains, up to 2500 mm annually. On average only a few hours of weak sunshine is seen daily as the cloud cover is at about 300 metres.

NEW PREFIX

A new prefix, HW is appearing on the bands and it is a special prefix for the 20th anniversary of UNARAF in France, an association for the visually impaired. Prefix HW3 will substitute a FC prefix, HW4 for FD and HW5 for FE.

ZC4 A NEW COUNTRY

The ARRL DX Advisory Council had recommended on a 15 to 1 vote that ZC4 becomes a separate DXCC country. The ARRL deliberated further and the Awards Committee voted 6 to 1 in favour of the UK Sovereign Base Areas on Cyprus (ZC4) becoming a new DXCC Country.

No credits will be accepted until the 1st of June 1985 but now it becomes difficult. Credits for ZC4 contacts made before the 16th August 1960, will continue to be credited to the Cyprus listing. All 5B4 credits count for the Cyprus listing. All ZC4 contacts made after the 1960 date were not necessarily from stations operating within the Sovereign Base Areas. Cards that show operation from within the Bases will be credited. The ARRL DXCC desk will make every effort to ascertain the location if it is not clearly indicated. If in doubt applicants may submit a number of ZC4 cards (if you have them) and every assistance will be given. More headache powders for the DXCC Administrator Don Search, I would venture to say.

NOT IN THE LOG???

Many amateurs, world wide, seeking a confirmation of the contact with VU7WCY have received the following note.

Dear Friend,

We are sorry to inform you that we have not been able to find your call sign in our log book, although we even checked the day before and the day after for any mix up in dates. We even went to the extent of checking the log books of the other operators to see if you have worked them.

The delay in acknowledging your QSL card was due to the time consumed in going through all the log books.

Wishing you the best of luck the next time.

73's,

GOPAL
(VU2 GDG)

"Boy" VK2DTH, contacted this group twice, on different frequencies and sent the cards off with the usual remittance. No reply, so he sent off again with "green" stamps and in return this carefully and professionally printed explanation.

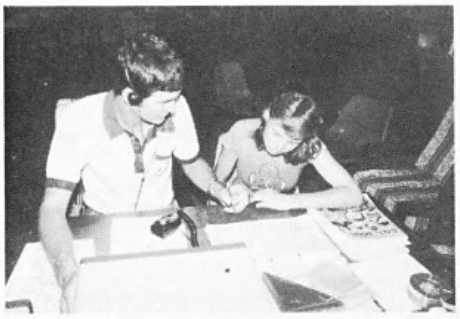
A VU YL on twenty metres went clear, with many excuses that urgent chores had to be attended to, after having four consecutive calls regarding the cards one evening. Within five minutes she was calling CQ North America, 100 kHz up the band and got many takers. Each very short QSO ended in the phrase "please QSL direct to . . ."

"Boy" at least received recognition that his letter was received, mine with a letter asking for a story and photographs and my card included along with ample funds for return, still remains unanswered.

Many QSOs, lots of IRCs and other good things and no cards. No one could miss that many entries in the log, surely or could they???

JOTA IN MALAYSIA

Peter 9M2PW, now back in Australia after a three year tour of duty at the RAAF Butterworth Air Base, assisted the multitude of Malaysian stations that took part in JOTA 1984.



Peter 9M2PW with 14 year old Debbie Gavin of the 1st Tanjong Bungah Guide Company.

SAN FELIX

The Radio Club de Chile members were so incensed by the bogus operation by Bob Read KF10 (refer AR September 1982 p30) that it was their ultimate goal to make amends to the world wide amateur fraternity with a genuine DX operation from one of the rarest DXCC countries in the world.

Patricio CE3GN, the International Co-ordinator of the Club kindly prepared the story of the expedition for Amateur Radio and it has been professionally and expertly translated by Louis VK3ZLD, a gentleman that has five languages at his finger tips.

SECRECY

All amateurs were bewildered as to why no advance information had been forthcoming as to this important expedition but it was the culmination of seven years of negotiations, always stressing the importance of this country being allowed on the amateur bands, with the Military who control the island, and the government that the final authorisation, with certain conditions, was given on the 21st August 1984 by a telephone call to the Club's President.

The conditions of operation were that the amateurs must be service personnel, be prepared to stay for two months, operate from a specific location and not stray from that area. The reason for these limitations is that San Felix is under strict military control and no civilians are allowed on the area.

PROBLEMS ALREADY

The chosen couple, Fernando CE3GXY and Max CE9DUN, both amateur operators in the Chilean Navy, though expert on CW were not conversant with the English language for SSB operation. The second problem was that they had ten days to arrange leave of absence from the Navy and arrange their transport to the island. These were apart from the organisation of equipment. Not easy tasks to overcome!

L to R: Fernando CE3GXY, Mickey CE3ESS and Max CE9DUN.

PROBLEMS OVERCOME

Fernando and Max had many helpers in assisting them to improve their English vocabulary. Amongst these were German CE3CBG, Enrique CE3BBW, Mickey CE3ESS, Edwardo CE3BOC, Jorge CE3CTI, Marcelo CE3BXP and Celso CE3ACA.

The equipment that was to be used for the expedition was partly supplied by the Club, with further assistance by loans from Club members particularly Pablo CE3JN, Enrique CE3BBW who supplied transmitting equipment, Mickey CE3ESS who supplied the three band antenna and rotator, Celso CE3ACA and Edward CE3BOC, who constructed the dipoles. German CE3CBG, Michel CE3DPD and Marcelo CE3BXP packed and prepared the equipment which consisted of 1 x TS-600, 2 x 830-Ss, with an external VFO, 1 x 130S and an AT230, 1 Honda E-500, 1 TET three band antenna and inverted Vees for 160, 80 and 40 metres, for transport to the island.

The operators getting in practice at the Club.

FAREWELLS

During the week prior to departure Fernando, Max and all the helpers involved in the preparations were treated to a celebration organised by the Club in appreciation of their untiring efforts of assistance.

Fernando making a point to Patricio CE3GN.

L to R: Standing. Patricio CE3GN, Mickey CE3ESS, Max CE0AA, Sitting. Fernando CE0AA and Enrique CE3BBW.

On the 30th August, a farewell was hosted to both expeditioners at a well known Santiquino restaurant, where they made a promise to be dutiful operators. Toasts were made in Chilean wine. Next day the two operators departed for San Felix Island with a feeling that they were doing something worthwhile for all amateur operators.

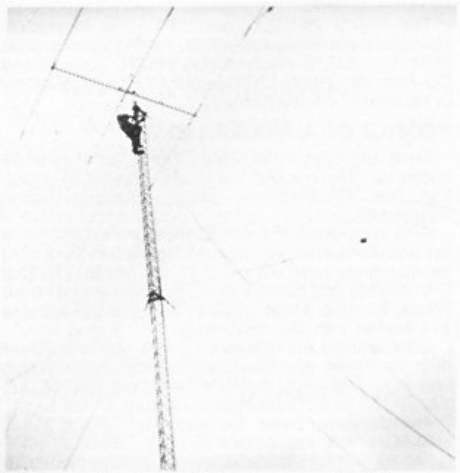
The island as depicted on the card.

THE ISLAND

The island of San Felix, located at 80 degrees parallel and 880 kilometres from the Chilean coast is 800 metres long and 2400 metres wide, being the result of a volcanic eruption and the surface is nothing other than rocks, with no vegetation of any kind.

The day after their arrival, both operators, by working through the night, had all the equipment operational. The same day at 2207 UTC they established their first contact to test the equipment. A historic occasion, CE0AA, a legitimate station, operational from this lonely and barren island, that would give a multitude of DXers a new DXCC credit.

Fernando starting to climb the tower. San Ambrosia Island can be seen in the background.



Max, at the top of the tower adjusting the rotator.

All contacts were kept short and to the point, so that it would give operators from all continents a chance of working one of the top ten most wanted countries. The

first few days were chaos, then when things settled down, operating was easy and times on all bands were adhered to as close as practicable.

THE CONTROLLERS

The controllers like Enrique CE3BBW, Mickey CE3ESS, Carlos CE3EEO, Michel CE3DPD, Ralf CE6EZ, Mario CE6COR and Carlos CE3NR were magnificent in their handling of the situations. Many other stations spent six to eight hours per day controlling the operation. Many international operators assisted and included Eva PY2PE, Toshi JA1ELY, Phineas W6BF, Ron KB7SO, Jack WB4GCP, Gail KF4IL, Jim KB7OC, John KC0YI, Loren K6EDV, Tex W6AHV, James NB7R, Nell HK0HEU, and many others who voluntarily gave their time to participate.

Patricio CE3GN, on behalf of the Club and its members, expresses his appreciation to the Chilean, international operators and many others that gave their time to participate and says "I cannot express enough happiness at the greatest effort put in by everyone for the common community cause and we also express our gratitude to the operators for the enormous amount of contacts made 6 to 160 metres, which were above our expectations".

RTTY

The 28th September saw another historic event, thanks to Fernando. This operator had received permission from the authorities on the island to operate the RTTY mode and many amateurs were able to conduct two way transmissions on the amateur bands with San Felix.

CLOSING DOWN

Enrique CE3BBQ, was the controller responsible for the expendition and at the beginning of October due to the fact of his commitments overseas, operations had to cease.

In excess of 31,000 contacts were made using the modes of CW, SSB and RTTY on all DXCC bands from 6 to 160 metres and in Patricio's words "The whole expedition came to a perfect ending which cannot be criticised. We are pleased that amateur operators all over the world are happy and to those responsible for the operation we are grateful that during the first few days, despite all the criticism, all went well and we were able to keep over 31,000 operators happy and give them a new country for their DXCC, the Island of San Felix".

It would be ungracious of me if I didn't endorse the last remarks and express sincere thanks to all concerned with the operation on behalf of particularly VK amateurs and amateurs world wide for the dedication of the club and its members in bringing about the activation of this rare DXCC country. (VK3AH).

BITS AND PIECES

News reports indicate that Ampil, the home of XU1SS and gang has been seized by the enemy. **160 metre enthusiasts could look for CE3DPD and CE3EEO who operate around1.835 MHz most days. **Gerry 5X5GK, it appears has some written documentation which will be forwarded to the ARRL DXCC Desk. He gets 100 percent in my book as trier. **Many EM, EO, EU, EW, ER and EV prefixes from the USSR which may be claimed for a special award, the details of which are unclear. Their use is to celebrate the cessation of hostilities of WWII, forty years ago, and apparently the suffix R designates that the operator was one of the veterans. **ZA1ST is working Europeans and advising them to QSL via OH2BDM. One wonders if OH2BDM knows about it, he soon will when the mail arrives. **VK3AH is not QSL Manager for VK0GC whose cards should go to P29JS. Cards for Denise VK0YL go to VK3AH. **OE stations may now use 100 watts CW from 1.850 to 1.950 MHz. **Many HI8 operators using HI0 prefix. **ARRL DX-CC Desk has had no documentation from PS7ABT/S9. Was he "alongside" when he made the calls?? **Betty, XYL or Tom VR6TC is believed to have passed the amateur licence and will appear with the call VR6YL. More operating hours from that QTH, that is for sure. **Les 7Q7LW, due back on the bands after holidays in the UK. **More operating hours from that QTH, that is for sure! **The LA group cancelled their plans for Bouvet earlier this year due to economics, politics and safety. **QSL cards for the special Olympic stations should now go to W6SZN or N6AUV. The P.O. Box has been closed. **The JAs hoped for a few hours operating last month from Bouvet after landing from a fishing boat and the LAs were still hopeful of a few hours operation as 3Y4FG. **RSGB Headquarters is located in Alma House. They have changed the name to Lambda House. Significant? **Dieter DK9KD, advises he is not the QSL Manager for the bogus stations DK9KX/5A or 5A1AA. **Genuine C9 operators may be heard more frequently in the near future. **BY5RF, a newly commissioned station from the Peoples Republic of China is quite active. **YI1BGD say they can now operate on 18 and 24 MHz.

CW SWLing with ERIC L30042

28 MHz
JR2QKH, VK3YK, VK3PIW, BEACONS VK2RSY, VK4RTL, VK5WI, VK6RWA.
21 MHz
HL1LW, IK7ANN, YC0DNK, ZL2ACP.
18 MHz
ZL1BEK, ZL1CZ, ZL4NH.
14 MHz
A35LT, AH2C, BV2B, KD5A/DU5, K7BAZ/DV1, KA3DWU/DV2, DU1UY, FK8DY, FO8HO FO8JZ, EA7FI, EO9AON, JQ1FEF, KX6PO, NH6BH/MM, OH1OU, OH8AA, UA0LU/R, UA9SHO, UL7WH, UL8GWB, UZ4PXA, VK0ML/5, VU2BAN, VU2IOC, YB2BNJ, YC2FEA, YC3KG, YJ8JH, YT8TT.
10 MHz
DL7AD/EA8, FO8FO, W2DT, WA1OFP/1, KM3A, W3OV, WB2PMP/4, K4OM, ZL1HY, ZL0AEU.
7 MHz
CT2ON, DJ2EY, EA1CLF, F9XL, FO8JR, EM2C, EW1AA, G4DMZ, G8NV/MM, G4OTU, HA7KSR, HB9IK, IK2EGL, KL7U, KX6DS, LX1PD, LZ1KAZ, OE3ZOC, OK3SIH, OK4PBM/MM, P29PL, P29PR, SP6CIK, UA6ARE, UB5ZZ, UD6CN, UP1BZG, UQ2GD, VS6DO, UM8MLE, YU2AKL, ZK1XS, 3B8CF.
3.5 MHz
JA, W5TZC, UA0ZZ, YD1LB, UP1BWR.
1.8 MHz
P29PR, OE8NOK/ZL5.

The operators and friends at the "welcome home" party.

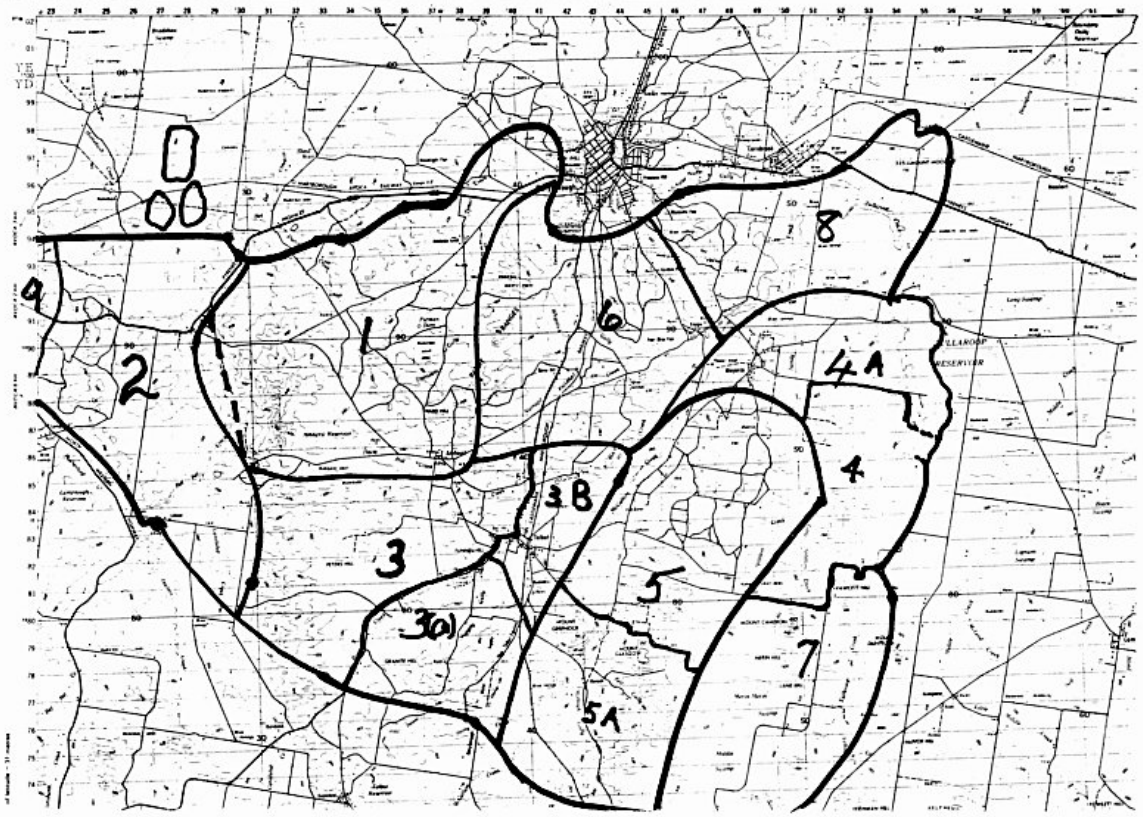
NOSTALGIA

Again is reproduced another card of yesteryear. The card was supplied by Arthur VK2JM.

THANKS

Special thanks go to the following. The Editors of weekly bi-weekly, and monthly newsletters including the ARRL NEWSLETTER, RSGB DX NEWS, QRZ DX, LONG SKIP, DX FAMILY FOUNDATION NEWSLETTER, JAN and JAY O'BRIEN'S QSL MANAGER LIST and KH6BZF REPORTS. Magazines including CQ, cqDX, QST, RADCOM, JARL NEWS, OZ, WORLD RADIO, 73, BREAK IN and VERON.

Members who have contributed include VKs 2JM, PS, DTH, EBX, 3BY, EW, FR, YJ, YL, ZLD, 4BHJ, 6NE, G3NBC, WA3HUP and L30042. Overseas amateurs include CE3GN, DK9KD, G1EOD, 18SAT, ON5NT and ON7WW. Good DXing and sincere thanks to one and all. **AR**



Approximately 30,000 head of stock were burnt and destroyed in the fire area bounded by the black line. Smaller divisions indicate the area of operation for each field team.

WICEN NEWS

Geoff Smith VK3ADB
PRESIDENT OF BALLARAT ARG
829 Laurie Street, Mount Pleasant, Vic. 3350

WICEN INVOLVEMENT IN THE MARYBOROUGH (TULLAROOP SHIRE) BUSHFIRE AREA ON 14TH JANUARY 1985

On Wednesday 16th January 1985 operators from Bendigo ARC and Ballarat ARG were called out on stand by for WICEN work with the bushfires at Maryborough. Operations began at 0730 EST on 17th January and concluded at 1800 EST on 18th January.

Amateurs participating from Bendigo were VK3's — XBL, DTY DML and DOV whilst from Ballarat — VK3s — ADB, VU, BNC, PAF, NIH, AEX, YMW and ANH.

A base station was set up in the Shire of Tullarbop offices using 146.500 MHz Simplex. To cater for difficult reception in outlying areas a manned relay station was set up on Bristol Hill (about 609.6 metres ASL) approx. 1 km from the base station.

Bristol Hill has a lookout tower about 21.34 metres high on its peak. An antenna (a Slim Jim) was erected on top of the tower which gave an excellent take-off to cover even the remotest corner of the Shire.

Individual field operation was required, in that the operators travelled in a Department of Agriculture/ RSPCA vehicle to various parts of the Shire to assess burnt stock and farm problems such as fencing, feed and fodder needs, arrangements for earth moving equipment to dig disposal pits for stock destroyed on site, location of portable yards and assistance with the personal needs of farmers affected by the fire.

The problem of portable/mobile operation was overcome by the use of magnetic mounted and gutter grip antennas. Rigs used were handhelds and various VHF transceivers powered from the vehicles cigarette lighter sockets. Problems were anticipated and catered for.

HF operation was not used but equipment was available if required.

Photograph courtesy of the Sun News Pictorial. Photographer Janine Eastgate.

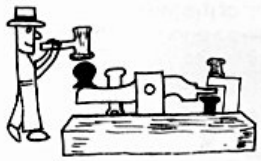
The Aftermath of the Maryborough Bushfire.

In actual operation no problems were encountered with messages due to the excellent location of the relay station.

At the end of each day, at the debriefing session, department heads and field officers stated that the standard of operation was highly professional and enhanced the performance of all in ensuring the various needs were promptly dealt with.

The contribution made by the WICEN operators from Bendigo and Ballarat helped relieve some of the misery endured by the strickened animals in this disaster.

The operation was co-ordinated by Dick VK3AEX and Don VK3XBL. **AR**



POUNDING BRASS

Marshall Emm, VK5FN
GPO Box 389, Adelaide, SA 5001

WHY USE CW?

Quite often people ask me why I am so interested in CW — how can anyone enjoy something so unnatural and so "difficult to learn?" I suppose the easy answer is that people are by nature contrary, and I enjoy doing all sorts of things that other people find a bit odd. Playing tennis, for example, is not natural and for most of us difficult to learn.

In my case, the main reason is that I spend too much time talking at work during the day, and smoke too much (New Year's Resolutions not withstanding) and the last thing I want to do of an evening is sit around yacking into a microphone!

In the January issue of this column I talked about the future of CW as an amateur mode, and now I'd like to devote a little more space to the nifty reasons why people enjoy it, why it is useful, and generally why it deserves to have a future.

The virtually iron-clad arguments which follow were in a large part suggested by a European amateur who can often work VK on CW when the phone bands are dead.

1 The bandwidth argument

Power relationships based on nominal signal bandwidth are summarised from a professional engineering journal in the following table:

Mode	Bandwidth	Power
CW	100 Hz	100
RTTY	400 Hz	96
RTTY	1000 Hz	90
SSB	2500 Hz	75
AM	5000 Hz	50
FM	12000 Hz	1

In addition, it is fairly obvious that detection of the presence or absence of an unmodulated tone is much easier to detect than making sense of human speech in all its various forms. You can filter a CW signal down to as little as 60 Hz width using readily available technology — dots can still be discriminated at 50 WPM. This means theoretically that something like thirty CW QSO's could take place simultaneously in the bandwidth occupied by a single SSB QSO! Thus the essence of the argument is minimal pollution in terms both of power of required bandwidth.

2 The speed of argument

Often turned against CW operation, the speed argument case comes into play once reasonable speeds can be worked with effective use of abbreviations, procedural symbols, and the Q-code. By reasonable speeds I mean as little as 15 WPM, though of course that can be improved upon! Listen to a phone QSO game some time and see just how long it takes to communicate how little.

3 The discipline argument

Learning the code requires a certain amount of self-discipline, as does using it properly. Amateur radio is generally deemed to be "self-regulating". It is also international, and a poor operator brings not only himself into disrepute, but all his countrymen. In my opinion it is not mere coincidence that the pressure for elimination of CW exams has gone hand-in-hand with degradation of manners on the amateur bands.

4 The language argument

It may well be that English is the official language of radio, but sometimes it is all but unrecognizable. Since it is by its very nature a symbolic language, Morse Code represents a far easier means of communicating with foreigners than speech. A Russian operator, for example, may well be thinking "spasibo" as he sends "TNX". Or put it slightly differently — if he wants to say "pagoda xoroshaya" he has to translate into "the weather is fine" if he's working phone, but "WX FB" is all he needs for CW.

5 The homebrew argument

The amateur is supposed to be an experimenter, but who has the money and the skills to homebrew something like a TS 930 or FT One? You can get pretty close to the CW equivalent with homebrew gear.

6 The emergency argument

Put arguments one through five together and you have a pretty useful tool when it comes to an emergency. If your car gets wrecked in the desert, smashing the CB to bits, and you have a good CW operator handy, odds are he can build a transmitter from odds and ends, get it on air, and get help on its way. But seriously, folks, it is a simple and effective means of communication, so long as people take the trouble to learn the skills. **AR**

ALARA

Australian Ladies Amateur Radio Association

Margaret Loft, VK3DML
28 Lawrence Street, Castlemaine, Vic 3450

1984 Alara Contest Results

Callsign	*Points*	*Comments*
VK4BSQ	996	Winner overall and VK4 ALARA member.
VK3CYL	892	VK3 AM
VK3DYL	556	
VK6DE	440	VK6 AM
VK2EBX	373	VK2 AM
VK3DVT	335	
VK7HD	283	VK7 AM
VK3DMS	277	
VE7YL	271	VE AM
VK2AHD	267	
VK4VNK	253	Top Novice score and MRS McKENZIE Trophy.
VK2KYL	240	
VK2DJV	235	OM Certificate
VK4VR	210	
VK4XA	205	
ZL1ALK	200	ZL AM
VK2SU	190	
KQ7Y	187	USA ALARA member.
VK4AOE	172	
VK4NUN	170	
VK3XF	140	
VK3RJ	120	
JJ1LQI	118	JA AM
VK6QM	113	

John: Southern Cross DX Club No 490 105 SWL Certificate

VK2NVQ	89	
L40018	80	
DJ0EK	74	European AM
VK2DIX	69	
VK6YF	68	
WB3CQN	41	
VK5ANW	40	VK5 AM
DF2SL	10	

Note: The call signs are in order of placings.

Check logs were received from VK5YL; VK3KS; VK3XB; VK3LC; VK8NW; VK3FG; ZL2BOD and VK5QO.

My very sincere thanks to all who continue to support ALARA through the contest and I do hope to hear from everyone again in November.

Congratulations to Wendy VK4BSQ for a very creditable score with the trying conditions we had, well done.

Jill VK4VNK is our very first winner of the Mrs McKenzie Trophy; it seems appropriate that our first winner is from Queensland and the trophy came from Townsville. Jill's CW score was 162. Congratulations Jill.

This year ALARA will be 10 years old and the Committee are presently looking at having a get-together in Melbourne to celebrate this special birthday. As ALARA was first activated in Melbourne, that would be a good place to meet again. Further details after our next committee meeting.

No definite decision has been made on how often get-togethers will be held as subscriptions are still coming in, questionnaires with them.

Austine VK3YL has asked me to pass on her thanks and best 33 to all ALARA members, she is delighted with her special log book cover and is using it with very happy memories of her surprise afternoon.

Until next month take care and good DX to all.

33/73/88
Margaret VK3DML **AR**

STOLEN EQUIPMENT REGISTER

In accordance with 1984 Convention Motion 84:17:01 the Federal Office has established a stolen equipment register.

Members wishing to take advantage of this register, either to publicise their loss or to check equipment offered to them may write or telephone to the Federal Office their enquiries.

To update the list published in the JANUARY issue:

MODEL	SER NUMBER	FROM
ICOM IC25A	03831	VK2DPM
ICOM IC45A	01876	VK2DPM
ICOM IC211	6804309	VK3BRV
KYOUTO FM144/10	5027	VK2KUR
DS EXPLORER	70 cm Transceiver (has extensive internal mods	
ICOM IC215	05156	VK2AMX
YEASU FT 209RH	4K050838	VK3CE*

*(Blue vinyl case complete with handbook the outside of which is stained)

AR

INPUT FROM MEMBERS

The 1985 Federal Convention will be held in Melbourne from 26-28 April.

Items which members wish to bring to the attention of the Convention should be submitted to their Divisional Office or Federal Councillor immediately.

As agenda items must arrive at Federal Office thirty days prior to the Convention — 26th March 1985 — it is imperative to move quickly so you don't miss out.

AR

Last month we viewed the Red Cross Murray River Marathon from the camera lens of Gil Sones VK3AUI, a stalwart of the Marathon for many years on the radio side. This month David gives us a look at the computer side of things which for the past two years have been provided by the Melbourne Packet Radio Group. Read on . . .

PACKET RADIO

David Furst VK3YDF
57 Laity Street, Richmond, Vic. 3121

What I did on my Christmas Holidays

by the Melbourne Packet Radio Group

As many of you will be aware, the WICEN group were assisting the Red Cross after Christmas in running the Murray River Marathon. (see centre pages February) So were the Melbourne Packet Radio Group. This article is not about packet radio as such, but about the type of people and the variety of talents that we hope packet radio will bring to the ranks of amateur radio.

WICEN were up on the Murray because it is vitally important that communications are passed up and down the river as to the state of the race in general and most particularly to make sure that if there are any injuries or mishaps the safety network can respond quickly.

The MPRG is composed of people who have been radio amateurs for many years as well as computer hobbyists. It was in this latter role that we were called upon by the Red Cross to provide a mobile computer centre.

In recent years the Red Cross have had increasing problems producing the results for this race which has been growing steadily. The problem is one of a complex system which grew beyond the means of humans to control it. There are approximately forty classes of entry in the race, 350 competing canoes, 500 entrants in those canoes, and the canoes start each morning in up to 15 starts spread over nearly two hours. All this would be complicated enough, however the race runs over five days and times and placings must be worked out each day. They must be produced quickly and they must be accurate to the last second. (*Unless you don't mind 4,000 irate canoeists and supporters on your back!*)

Originally the Red Cross approached the Micro Computer Club of Melbourne in April of 1983 with a request for help. The two founding members of the MPRG, Peter Jetson and myself, volunteered for this job. It was just as well that we had no idea of what was before us or we would never have done so.

Over the months that followed there were endless meetings so we could form some idea of what had to be done, in what time frame, and how.

Very early in the piece we realised that computer reliability was going to be paramount. This instantly ruled out using one large multi-user machine. These things are difficult to fix and if you have just one and it dies, then all of a sudden you have no computers any more. We decided to use a number of smaller machines because we could theoretically still do the job even if we lost one or two of them — though more slowly of course.

During the mid afternoon we could expect to have boats arriving at the rate of one every 20 seconds or so. As computers are sometimes just plain temperamental (remember Murphy?) we had to come up with a fail proof way of running a computer so that it just could not break down. This seemingly impossible task was accomplished by hooking up two computers so that whatever was typed into the keyboard of one also appeared on the other. If one died, the other would still have the results up to the last second. We used separate power generators and separate power filtering boxes for each machine so that whatever else happened we could only lose one machine at a time.

All this gave us enough computer power to be able to enter the finishing times each day, but when would we have time to do periodical printouts of results during the race? Another computer was added to the plan. This one was to be used to do printouts, to write new programmes and modify old ones as needed.

It was somewhere about this stage of the planting that a realisation struck us: we had to be loco to be trying something like this. Alternative plan Q was put into place. In case everything fell down in a shambles we would leave the cars pointing towards Sydney with the motors running. We don't live in Sydney; we just thought that Melbourne would be the first place that they'd look for us.

More potential problems surfaced: How do you enter 350 boat numbers and times quickly, each day for five days and without errors? The scheme settled upon was where one person read out the information while another keyed it into the computer and both people checked in. As a further check, when the data was entered into the computers one of them printed it out there and then. The numbers on this printout were always compared to the numbers we thought we'd entered.

In 1983 we had the computers travelling in separate cars and we went from site to site finding a room where we could set up a computer centre. In 1984 we thought that it would be better to have everything set up in a travelling computer centre which could be set up on the river bank next to the finish line. Here was another set of problems awaiting solution. First we needed a caravan or bus to put the computers into. National Business Systems were approached and agreed to lend us the bus they normally use around the suburbs demonstrating their range of computers. They sell Sharp computers and the model 3500 was just about perfect for what we were doing; they were kind enough to lend us three of them, plus a fast printer. We added a fast printer of our own plus a slower printer so we had plenty of spares. Having so many computers and printers gave us the ability to produce heaps of reports when called upon — which was surprisingly often.

The Micom/NBS Mobile Computer Centre at Yarrawonga.

Since this was the only computer centre we had we protected it jealously. We travelled in convoy with cars preceding and following the bus at all times. We have lots of amateurs in our ranks so each car had a two metre rig running on 147.6 MHz (the Packet Radio channel — remember Packet Radio? This article is supposed to be about it).

Up on the Murray it's pretty dusty. You and I might not like that, but computers positively hate it. Next problem: how do you keep the dust out of the bus and not suffocate or burn up in 40 degrees plus heat? Simple! — get an air conditioner.

Have you ever tried to borrow an air conditioner in mid summer? We spent three weeks phoning around before Dunn Air came to the rescue. Of course buses are not like houses and you cannot mount air conditioners in their walls — particularly when you have to give the bus back in pristine condition. Rayson Industries helped out with some cunning ductwork which allowed us to sit the air conditioner on the ground and pipe the air into the bus. It looked pretty weird, but there was always competition to sit next to the duct where the cold air came out.

Just to finish the list of companies who helped us out so generously. I would like to thank Dabo Computer Supplies of Melbourne who provided the diskettes to put the information and programmes onto. We needed disks that were near bulletproof and their Dysan disks are the best there is.

One of the Sharp Computers lent by NBS for the Marathon.

Liz Moss of National Business Systems went to great efforts on our behalf and I would like to acknowledge them specially. Australian Industrial Publications (my employers) were good enough to provide a petty cash fund for all the various small expenses involved with this project and the State Emergency Service provided generators to provide power (No Matilda, there are no power points installed on the trees next to the Murray).

It is impossible to do something like this without the assistance of others and heartfelt thanks go to those people and companies who have helped so generously.

Of course all the above is only the logistics of getting the right gear in the right place at the right time. Computers won't run without programmes. Our specialist programmer is Peter Jetson from the MPRG. Without Peter's particularly practical way of seeing a computing task and writing particularly practical programmes to do the job all the above would have been wasted.

Peter chose CP/M as the operating system to use. This allowed him to do some rather cunning things with fake submit files to run a few progammes in a row and end up back at the main menu.

The Computer Centre with David VK3YDF, holding Shorty the dog, Sue, David and John.

The computer language he chose was Microsoft Basic. This is easy to write with, will allow a programmer to do almost anything, is understandable to the whole team and lets you easily modify programmes as needs arise.

To print anything you first have to get it in the right order. This is done by sorting it. Peter selected Supersoft because it runs quickly and is a good reliable piece of software.

The programming task was still prodigious. A programme had to be written to get all the names of the competitors, their canoe numbers and their classes into the computer. Another programme had to be written to be able to change any of the above details if conditions changed. A programme had to be written to allow us to enter daily times and points scored as the race progressed.

Other programmes had to be written to produce the various reports needed by the people who run the race.

The people who put the canoes onto the water needed starting lists to tell them which canoes to set off at which time. The chap who decided the starting order needed a similar list, but with the names of all the competitors included. The Race Information Office needed race result printouts for the competitors — two separate formats depending on whether it was a preliminary result during the race or a final printout at the end of the day; he also needed a list of all the canoes in the race in absolute finishing time order, as opposed to printing them out by class. The publicity people needed a list of the fastest twenty canoes for the day and another list of the fastest three canoes in each class. The finishing line people needed a list of which canoes were not accounted for at the end of the day both for accuracy of results and for safety reasons. Everybody needed lists of all the competitors in boat number order and in alphabetical order. We needed programmes just to look after all the other programmes.

The length of a computer programme is measured in K — K stands for 1024 (which is two to the power of ten). Peter wrote 150 K of programmes to do the job. This means that he pressed the keys of his computer terminal about 153,600 times as he wrote these programmes in three weeks of his spare time. It is worth mentioning that if you or I tried to write a couple of K of programmes it would probably be full of errors — 'bugs' in computer terminology. Peter's programmes were error free when we got them to the Murray.

So how did it all go? Well 1983 was our first try at doing this job and we had our troubles. One day we spent the entire night pulling apart every piece of computer gear and extracting the dust from its innards; hence the bus in 1984. The rest of the 1983 Masochism Special went increasingly smoothly, culminating in our team being able to set up the computer centre in any room anywhere in about seven minutes.

In 1984 things went even better, with a couple of minor exceptions. One of our generators went west which forced us to (HORROR!) half air conditioning. Someone had changed the gearbox in the bus a couple of weeks prior to the race and forgotten to tighten the bolts which hold the driveshaft to the gearbox. Naturally this broke down at an inopportune time. A combination of a couple of our people, one of the Land Patrol people from the Land Rover Club and

"Dead Bus Blues".

some help from the people of Yarrawonga put it right in two and a half hours. The rest of that day passed in a pleasant flurry of action culminating in a mess because someone on the finishing line gave us numbers which didn't make sense. This is where it is appropriate to mention a golden rule of computing — GIGO (Garbage In — Garbage Out). None the less everything was sorted out and final results for the day were duly printed.

At this point it was decided to change the starting times for all the canoes but eighteen. Having a computer centre allows the marathon officials to change the starting times so that the slowest canoes get onto the water earliest and consequently finish earlier than they otherwise might. This is useful as it lets all the safety people and other officials get back to camp for dinner before 10 pm. This took until almost two the next morning which happily provided us with an excuse to get up late.

Getting up late at the Marathon is not as easy as it sounds. At about 5 am a guy with a nasty sense of humour drives around the whole camp alternatively playing various renditions of 'Morning Has Broken' and cracking jokes about early mornings. We learned two lessons from this. 1 We have all developed an aversion to 'Morning Has Broken' and 2 Any joke is bad at 5 am.

Any article about the Red Cross Murray River Canoe Marathon is not complete without honouring the especially brave amongst the paddlers — remember them? They're the people we're all there to look after. In 1983 Wendy Asche — a young lass from Melbourne was last every day without fail. We all looked forward to her arrival partly because it meant that all the paddlers were in, but mostly because we admired her for doing what we couldn't have. Wendy was back in 1984 paddling a double with her cousin Allison. Thank you Wendy for the inspiration that you gave us.

The 1983 Marathon raised about $90,000 towards the good work of the Red Cross organisation. As this is being written the figures are not yet in for the 1984 Marathon, though we hope to have bettered last year.

Wendy Asche at the Final Finishing Line.

The Fastest Boat.

The Red Cross Murray River Canoe Marathon is billed as 'The Great Adventurer' and I commend it to you as one of the most enjoyable and most valuable experiences you could have.

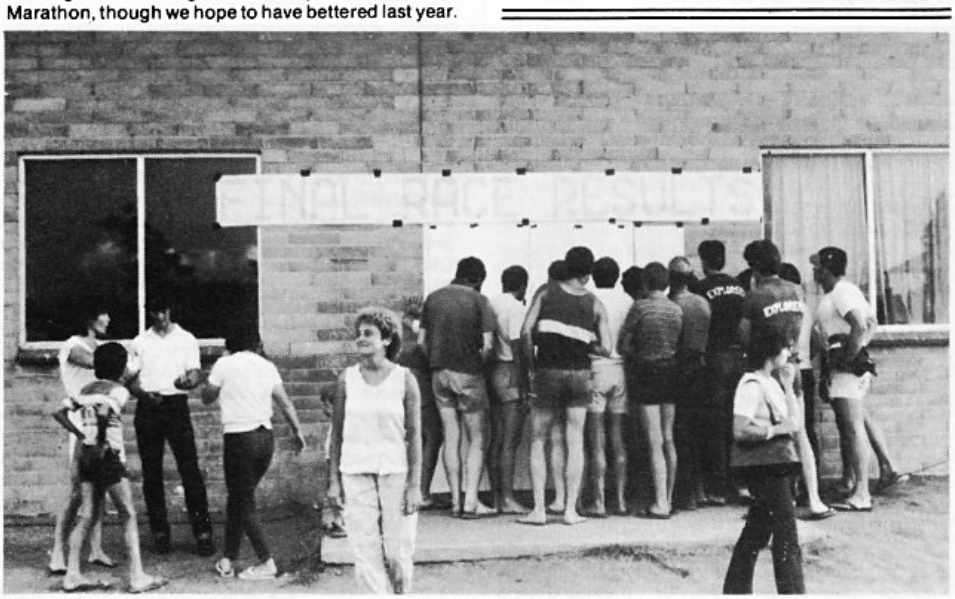
AR

USING MORSE

As from 1st April 1985 to 31st March 1986 United Kingdom amateurs holding a Class B licence will be able to conduct QSOs in Morse code.

It is hoped that this experiment will encourage more to pass the amateur Morse test and upgrade their licences.

AR



The End of a Hard Week's Work.

VHF UHF - an expanding world

Eric Jamieson, VK5LP
1 Quinns Road, Forreston, SA 5233

All times are Universal Co-ordinated Time and indicated as UTC

AMATEUR BAND BEACONS

FREQ	CALLSIGN	LOCATION
50.005	H44HIR	Honiara
50.008	JA2IGY	Mie
50.020	GB3SIX	Anglesey
50.045	OX3VHF	Greenland
50.050	GB3NHQ	England
50.075	VS6SIX	Hong Kong
50.109	JDIYAA	Japan
50.945	ZS1SIX	South Africa
51.020	ZL1UHF	Mt Climie
52.020	FK8??	Noumea
52.013	P29BPL	Loloata Island (1)
52.100	ZK2SIX	Niue
52.150	VK0CK	Macquarie Island
52.200	VK8VF	Darwin
52.250	ZL2VHM	Manawatu
52.300	VK6RPH	Perth
52.310	ZL3MHF	Hornby
52.325	VK2RHV	Newcastle
52.350	VK6RTU	Kalgoorlie
52.370	VK7RST	Hobart
52.420	VK2RSY	Sydney
52.425	VK2RGB	Gunnedah
52.440	VK4RTL	Townsville
52.450	VK5VF	Mt Lofty
52.465	VK6RTW	Albany
52.470	VK7RNT	Launceston
52.490	ZL3SIX	Blenheim
52.510	ZL2MHF	Upper Hutt
144.019	VK6RBS	Busselton
144.410	VK1RCC	Canberra
144.420	VK2RSY	Sydney
144.465	VK6RTW	Albany
144.480	VK8VF	Darwin
145.000	VK6RPH	Perth
147.400	VK2RCW	Sydney
432.057	VK6RBS	Busselton
432.159	VK6RPR	Nedlands
432.420	VK2RSY	Sydney
432.425	VK3RMB	Ballarat
432.440	VK4RBB	Brisbane
1296.171	VK6RBS	Busselton

(1) Note new call sign and address of former P29SIX beacon.

NEWS FROM VICTORIA

It's not often I get a letter from Victoria, but one has arrived from Eric VK3BXA who lives at Thoona, about 35km north of Benalla. Eric came on 6 metres first in 1979 with an IC502 but found the lack of a suitable antenna quite a problem. Since 11/12/84 he has been able to use a 50 to 600 MHz log periodic antenna at 17m, and his first DX on that date was to hear the VK0CK beacon and then called VK0CK at 0639 but no reply! Although hearing many stations in QSO his first successful contact was VK4ZWH at 0112 on 15/12 followed by VK4ALM at 0134 and VK8ZLX at 0612.

Somewhat elated with the contacts he was having, Eric took his IC560 to work, made up a dipole antenna mounted 2m above the ground, and worked VK8ZLX at 0612. Subsequent contacts were: 16/12: VK8TM, VK4TKA and VK4LE between 0340 and 0400. 19/12: VK4ALM at 0016, then VK3APF followed by his first ZL, ZL1BHX, then ZL2AQR at 0529. 20/12: VK6ZPG; 21/12: VK2HT, VK3UG, VK5PZ (first VK5) at 0347, VK5KPM, VK8GB, VK4ZWH, VK4ALM, VK8VV, VK4AEW. 30/12: ZL2AQR at 0002, ZL2TJX, VK3ANP, ZL2CD, ZL2BGE, VK4PG/P and VK4ZKE.

Eric is nearing completion of the construction of a QQEO6/40 linear for 6 metres which should help. Amongst other things he also lists hearing quite a number of beacons, particularly from New Zealand, and this has allowed me to confirm that a number of those I have listed are in fact working and on frequency.

Eric also listed a number of call signs of 6 metre stations he has heard operating SSB in the CW segment which according to the WIA Band Plan is from 52.000 to 52.050, with the first 10 kHz being for EME only, and accordingly has asked me to list his objections to this useage.

My comment: Eric's objections as a CW operator are valid but he may have a long hard journey trying to enforce compliance. I have been operating on the VHF bands for 25 years and subject to being corrected, I believe it has only been of recent years that a band plan for VHF and UHF has been produced, and wherein it was natural enough to follow the trend of HF and have the lower part of the band for CW operation. However, as in a lot of other areas and fields of endeavour, useage tends to dictate acceptance, and the level of CW operation on 6 metres has been so low and still is after many years, that you would have a major task achieving compliance.

Further, with the now world wide acceptance that 52.050 is the VK calling frequency, which took years to be acknowledged in other countries, it seems unlikely those interested in the band will push for it to be changed. The position is entirely different on HF where the CW segments are in constant use, often on a world wide basis, but it is difficult to justify 50 kHz on 52 MHz for the same reasons. It seems to me that the lower portion of 52 MHz, say below 52.020, is not greatly used by SSB stations and I wouldn't know when I last had a contact down there. If I make a contact by using the calling frequency of 52.050, and the contact is going to be more than a few moments, I invariably suggest shifting higher up the band rather than going lower, and I note many other stations do this too.

It is interesting to campare the present day with the days when AM operation reigned supreme. Stations then, during a big Es opening, would be spread from 50.000 to 50.600 (later 52.000 to 52.600) and you could often identify a station by his frequency. Mainly due to the lack of good VFO's and transceivers, split frequency operation was the order of the day. Today, with so much commercial equipment in use, the tendency to follow the HF pattern of both stations working on the same frequency is the norm hence less spectrum space generally is involved. Whilst this may be a pity in some ways when considering the need to use the bands, that's how it is at the moment, if you want a contact you call on the other operators frequency.

To round off the discussion, I think it would be unwise to try and change the present 52.050 calling frequency. Some measure of success might be gained by trying to keep say the first 20 or 25 kHz of the band for CW despite what the band plan indicates. Myself, I am not against CW at all, in fact, some of my most prized VHF and UHF contacts have been made using CW. I recall successfully working FO8DR once on 52.010 with signals too weak for any hope of SSB getting through. However, generally speaking, I think 6m is still not too cluttered for CW to be unsuccessful wherever used, and the least useage by SSB stations is certainly towards the zero end of the band. I expect to receive some flak because of the sentiments expressed, but that won't worry me providing views expressed are based upon a realistic approach to the situation and are constructive. A dogmatic approach purely based on a set of figures quite out of touch with reality will not receive very much support from the VHF fraternity. Thanks for an interesting letter Eric.

NEW VK — ZL CLAIM

Wally VK2DEW at Orange would like to lay claim to being the first operator to work both ways across the Tasman on 144 MHz tuneable. Before some of you start looking at dates this refers to someone who first of all worked across the Tasman FROM New Zealand, and has now worked across the Tasman FROM Australia!

Wally worked Hughie VK5BC on 23/12/65 when Wally had the call sign of ZL2TCW (Tea Cup Wally!). On 29/12/84 at 0740 Wally, as VK2DEW worked ZL1BHX at Kaitaia on 144.100 SSB, which incidentally was the strongest signal Wally had ever heard on 2 metres, with the needle of the S metre refusing to leave the stop!

In 1965 the contact was on AM using 30 watts to an 832 and a 4 over 4 slot antenna and a 6CW4 Nuvistor pre-amp and a R and H convertor to a homebrew receiver. The 1984 contact was 30 watts from a homebrew amplifier solid state to an 11 element swan type yagi, masthead pre-amp and an IC202.

The opening lasted only 10 minutes into Orange and Tony called on "Fred" the Orange repeater and Wally worked him again 5 minutes after the initial contact. Congratulations Wally. Can anybody take up the challenge, if so, please let me know with relevant dates for verification.

VK3UM AND EME

Doug VK3UM continues to have much success with his 432 MHz EME setup. All of his contacts have been random QSO's. This indicates both the high degree of activity which exists on the band and the fact that his large EME antenna array must be working very well.

On 7/12/84 he worked JR4AEP at 1700; 8/12 JA4BLC at 1756 and again at 1810. On 15/12 at 2325 he was echo testing and was called by G3LQR; 30/12 HB9SV at 1350. On 2/1/85 JA3IAF at 0617 and JR9AOH at 0645; 4/1 ZL2AQE at 0922; 5/1: N4GJV 0910, JA4BLC 1015, OH2DG 1440, OK1KIR 1500, I5MSH at 1618 with 549 reports both ways, the I5 station was using a 35 foot dish, 1635 F1FHI 539 and then G3SEK. 6/1: K2UYH 0950; at 1600 conditions were rather poor and no echoes were heard. 11/1: at 2300 HB9SV and others were very good with reports up to 569. Between 2315 and 2337 they tried SSB (to HB9SV) and reports were 5x3 both ways. 16 yagis were in use at both ends of the contact!

Overall, not a bad effort for random contacts. Thanks Doug.

METEOR SHOWERS

A letter to hand from John Moen VK2KA, of 6 Gordon Street, Armidale, NSW 2350, raises the subject of possible VHF wave propagation by reflection from meteor showers, when, we are told, distances of 2000km or more can be covered. He is particularly interested in the Eta Acquarids which come within the limits of 1st and 8th of May, and are a type D stream, considered to be a major stream but owing to their latitude give very weak displays in north temperate latitudes, and the Orionids from 15 to 25 October and are considered to be an A stream and giving regular annual meteor showers of good strength. There is evidence that these two streams are associated with Halley's Comet, and reference can be found in Dennis Di Cicco's article in "Sky and Telescope" September 1983, page 212.

John is hoping to be able to arrange some skeds in advance of May 1985. Even negative results in the way of observation would be important, as comparison could then be made with the same period in 1986, which almost coincides with the closest approach of Halley's Comet to the earth at only 0.42 AU distance, on 24th April 1986. Angles of altitude and azimuth would have to be calculated for the observer of his particular longitude and latitude. The optimum times would occur on 5th and 6th May between 1.30 and 5.30 am local time. Aquarius rises due east at 1.30 am. As an example, early on Sunday morning at 1930 UTC

on 4/5/85, for communication between Adelaide and Sydney, the following beam headings would be required: Adelaide: 58° 9' AZ and 37° 6' EL. Sydney: 46° 0' AZ and 45° 58' EL.

John says he is in regular contact with Cyril Rice VK6MY, Co-ordinator of the WIA Comet Sub-committee, and Mostyn Lower VK5ALH is the representative in SA.

If you are interested in arranging skeds for attempts to make any VHF contacts via these meteor showers, then it is suggested in view of the rather short notice you contact John direct at the address given above.

THE ANNUAL TWO METRE OPENINGS

For quite a few years now January has provided conditions suitable for an excellent range of contacts right across the southern portion of Australia on two metres and 70cm. January 1985 was no exception.

Owing to the lack of a two metre beacon in Mt Gambier it was a little more difficult to judge the conditions, but the weather maps seemed to show something was about to happen. My first indication was a 5x7 contact with Chris VK5MC at Hatherleigh near Millicent in the south east at 0942, followed later at 1035 by Trevor VK5NC in Mt Gambier at 5x2, the conditions not having got quite as far as Mt Gambier at that time. Weak signals were also heard from VK5ADT, VK3ZHP and VK3ZBJ around 1240. About this time Colin VK5DK was 5x6 with his antenna on Melbourne which probably would have been 5x9 if turned my way. At this time, as far as I was concerned, there was no sign of any activity from Albany and the two metre beacon from there was not audible, although with my 30dB hill attenuator this never really surprises me!

Throughout the next day, 8/1, a few signals were noted here from the Melbourne area but they were weak. It looked to me as a prime example of coastal ducting because it was not reaching far enough inland for me to enjoy enhanced signals. Bob VK5ZRO at 1120 on 8.1 worked Wally VK6WG on 144 at 5x9 and 70cm 5x3. At 1207 he worked Aub VK6XY on both 144 and 70cm but there was no sign of either station here! Bob reported later to me that the band had been open on 2 metres all day on the 8th and 9th, and he had a number of contacts from time to time into Albany.

10/1: This seemed when conditions really peaked. At 1045 Bob VK5ZRO had a contact with Rob VK3BHS at 5x3/5 on 144.080, and Bob has a very difficult path to VK3. At 1052 Bob worked VK6WG and at odd times throughout the night whenever he felt like it, signals were so consistent. At 1114 even VK5LP managed to work VK6WG on 144.1 at 5x4! Rob VK3BHS was also 5x4 at 1118. At 1146 I worked Aub VK6XY on 144 at 5x7.

1296 MHZ FM

A number of contacts have been made between Albany and Adelaide on 1296 in the past, but on 10/1 at 1215 Wally VK6WG transmitted a signal to Bob VK5ZRO on 1296.1 on FM and was received at the Adelaide end 5x9 + 60dB! Bob's return signal was also S9 but Wally was unable to adequately resolve the FM, desperately trying to slope detect the signal on his transceiver! They tried on and off for some time as the signals were available for hours. How frustrating!

FIRST TIME INTO PERTH

The next morning still on 10/1 (UTC day) at 2247 VK5ZRO and VK5KBU were still working VK6WG when VK6KRC in Perth was heard calling by Brian VK5KBU. They quickly concluded a 144 MHz contact then went over to 70cm and at 2248 VK5KBU worked VK6KRC for the first ever 70cm contact into Perth, the distance being about 2280 km. VK5ZRO worked VK6KZ at 2301 on 144 at 5x6 and then 70cm at 2305 5x7, and at 2310 VK6HK on 144 5x7 and 70cm at 2315 5x5. At 2318 VK5ZRO also worked Bernie VK6KJ in Albany on 70cm at 5x7, indicating the band was open to both Perth and Albany at the same time. At 2330 VK6KZ was worked again by Bob on 70cm at 5x6. Others to work into Perth around those times included VK5ZTS, VK5ATV and VK5ZDR. Although alerted by telephone to what was happening by VK5ZRO there was no sign of any signals from the west on either band at the VK5LP QTH! Later VK5 worked to VK6ZFY at 2334 and 2345 at 5x5.

Congratulations to Brian VK5KBU for being the first to work from VK5 to Perth, generally acknowledged as being a fairly difficult path.

While all the excitement was going on in the west on 70cm VK5LP had to be content by working Roy VK3AOS at 2306 5x7 and Les VK3ZBJ at 2320 and David VK3AUU 5x3, the latter two being in Melbourne metropolitan area and 50 miles east of Melbourne respectively. But I don't mind, I take what comes!!

PORTABLE OPERATION

In view of all the happenings on 10/1 and with VK5ZRO working VK6FM 5x5 at 0003 on 11/1, it appeared the band might still be in good shape. Accordingly, VK5LP decided a spot of portable operation might be in order so the Kombi van was loaded up with 144 and 432 MHz gear and on the evening of 11/1 a trek was made out to my favourite No 1 hill to see what transpired. A 125 AH battery supplied 12 volts for all the equipment which allowed me to run either 10 or 80 watts on 144, and 10 or 50 watts on 432, each case depending on whether the solid state linears were used. An 8 element yagi on a 14 foot boom sent the signal out on 144 and an ATN type 16LB yagi was used on 432, mounted 15 and 20 feet high respectively.

A check with Steve VK5AIM at 0900 confirmed everything was in order, and Steve agreed to come out and keep me company for the evening. First distant contact was with Trevor VK5NC in Mt Gambier on 144 at 5x9 at 0915. At 0956 it was VK5EE also in Mt Gambier at 5x4. At 1010 worked VK5CI at Port Pirie 5x9, VK5AAC Ron 5x6, then Don VK5ZRG at Whyalla 1025 5x8 and VK5ZGV Graham 5x3 at 1030. All these contacts were on 432.1 which was a big thrill for me as I had never ever been able to hear VK5ZRG on 432 before from home.

At 1112 worked Roy VK3AOS 5x7 on 144, 1130 VK5ZO Des 5x7, and 1142 VK3BVS Bob 5x3 both on 432. At 1288 worked Colin VK5DK in Mt Gambier at 5x9 on 144 who then called up David VK7DC in Burnie whom he had worked on 144 and 432, and I was then fortunate enough to have 5x4 contacts both ways with David on 144 and 432. That was my first 432 contact ever into VK7 so if nothing else the effort had been worth while. 432 contacts with VK5DK 5x6 at 1306 and with Jim VK5ZMJ 5x9 at 1312 ended the nights operations. Steve VK5AIM was very happy to make some /P contacts using his own callsign, particularly to VK7DC.

The antennas were left up over night, and the van was brought out again next morning and at 2105 promptly worked Rob VK3BHS on 144 at 5x9 and at 2116 he was 5x9 on 432. A 432 contact with Roy VK3AOS at 2121 was 5x6, then followed 5x9 contacts on 144 with VK3BHS at 2125, VK5DJ Millicent, VK5ZRO. At 2221 a 432 contact with VK3BVS 5x3, finishing on 144 at 2222 with VK5BMW and VK5DK again all 5x9.

What all this means of course is that the favourable conditions made it worthwhile for me to go to the trouble of going portable (and it is quite a deal of trouble I assure you) but it also meant that people favourably situated like Colin VK5DK in Mt Gambier were able to stir up a degree of interest in VK7 by working several stations there with 5x9 signals, and of course many contacts into Melbourne. Such a shot in the arm helps to maintain interest in 144 and 432 MHz operations and I certainly was grateful for so many stations being on.

By the night of 12/1 the enhancement had disappeared for most of us so we had to be content working into VK4 on six metres!

OTHER SMALL ITEMS

John VK5KLJ phoned me to say he had worked VK6NE on 144 and 432, and that it was exactly 12 months since his last VK6 opening. He also worked VK6XY at 5x9 on 144 running 2½ watts, all on 10/1.

John also reported on the remarkable coincidence when he worked Frank VK6DM on 14/1 from 1354 to 1401. He said it was 12 months to the day and time that he last worked him, last year the time was 1400 to 1403. You couldn't get much closer than that if you were really trying!

Lance VK4ZAZ was 5x9 on 6 metres on 12/1 at 0101 and mentioned working a FK1 who was running 2 watts from an IC502. VK4LE had worked a ZL on two metres and also P29 on six metres. Mary VK4PZ had worked FK8EM and ZL. The FK8 had been at 1100 UTC on 10/1 which is fairly late for Es.

On 9/1 VK4FU worked into Brisbane on two metres and the same day Russian TV on 49.750 was observed in VK4. Same day George FK1SB was 5x9 into Sydney around 2300. And ZL2TPY worked VK1VP and a station in Dalby, Qld on 2 metres.

BAND CONDITIONS

Brian VK2AKU at Narrabri, about 430km north of Sydney, has sent copies of his log for perusal and as he lives in an area with some prime DX potential I thought you might like to know the spread of his contacts on six metres starting from November when the band starts to open.

2/11: VK4 and VK8; 6/11: VK2, 3, 5, 7, 8; 7/11: VK2, 5; 9/11: VK2, 3, 5; 12/11: VK2; 13/11: VK3, 5, 7; 15/11: VK3, 5, 7; 16/11: VK4, ZL1, VK9ZA, JA2DDN; 17/11: VK2, 4, 6, 9ZA, FK1SB; 18/11: VK8; 19/11: VK3, 5; 21/11: ZL2, 3, 1, VK2, 3, 5, 7, 6; 22/11: VK5; 23/11: VK3, 5, 7; 25/11: FK8EM; 26/11: VK7; 27/11: VK6, 7, ZL2.

1/12: VK4, 7; 2/12: VK4; 4/12: FK8EB; 7/12: VK7, VK0CK; 8/12: VK2, 3, 7, VK0CK; 13/12: ZL2; 14/12: VK8; 15/12: VK3, 4, 5, 6, 7; 16/12: VK3, 4, 5; 18/12; P29BH; 19/12: VK7, 8; 21/12: VK5, ZL2, 3; 22/12: VK5, 7; 23/12: ZL2; 24/12: VK6, 8; 25/12: VK4, ZL1, 2; 26/12: VK4.

Brian also operates on 2 metres and says he works Gordon VK2ZAB in Sydney every night at 1030 UTC. Others include VK2KFE, VK2BQW, VK2DFY and VK3XEX.

HF AWARDS AND STANDINGS

After the publication of the Two Metre Standings List awhile back I received a few comments directed towards what could be some reasons for what seemed an apparent lack of interest in submissions for inclusion in the two metre list.

The question was asked of me whether it was allowable for an operator (in this specific case Steve VK4ZSH) to travel around Queensland picking what seemed the most favourable and/or closest spots to other areas and then being able to claim having worked all States. *Were there not limitations on how far an operator could move from his home QTH and still claim to be in the same area?* In Steve's case he had made a contact to VK6 from the western border area of Queensland, also to VK8.

In the back of my mind I seemed to recall years ago that one could only operate within an area of 150 miles of home but not being sure, I wrote to the WIA Awards Manager requesting his views on the matter. A subsequent phone call from him brought the advice that there appeared to be nothing laid down to prevent the contacts Steve had made, but generally fair practice would tend to indicate one would expect an operator to make his contacts within a fair and reasonable distance from the same point. One might then suggest that 250km (about 150 miles) would allow operators some flexibility and overcome the problems of those people having poor locations and still be seen by others to be a reasonable distance from the home QTH. Just how they view this situation will be up to Steve and any others concerned, but I do suggest future claimants ought to consider making all their contacts within those limits, or if having moved permanently to another location a dispensation sought for the new location.

GOOD CONTACTS FROM SYDNEY

Ross VK2ZRU has written to say that on checking the bands on 17/1 he found two metres open to ZL during the afternoon and building up to a peak around 1100. He contacted Brian ZL1AVZ on 70cm at 1040, others who worked Brian included VK2BDN, VK2DFM, VK2YYO and VK2BXT.

At this time signals were over S9 so they went to 1296.1 MHz and contact was made around 1050 between ZL1AVZ and VK2ZRU and VK2BDN with signals to 5x8/9 both ways. ZL1AVZ was running 0.5 watts to a 3m dish and VK2ZRU 1.5 watts to 4 x 25 element loop yagis. MMW transverters at both ends.

The first such contact was made across the Tasman in February 1983 by Dick VK2BDN and Brian ZL1AVZ. The path is most likely open on 1.2 GHz when such conditions exist on 144 and 70 cm. There are at least six stations active on 1.2 GHz in Sydney. Congratulations to all the operators, a good effort indeed.

END OF THE CARNARVON BEACONS

Andy VK6OX has advised that the Carnarvon beacons operated for the last time on Christmas Day 1984, and the reasons for their closure are included in the following statement.

"After several years of almost faultless operation, the decision to cease operation of the Carnarvon beacons came as a result of several factors which I shall briefly describe.

"I have personally maintained the beacon equipment for some years, since the Carnarvon Amateur Radio Club exists now, only on paper. In early 1986, the operation of the OTC Satellite Earth Station, where I am employed, will cease for all practical purposes, and employees will be transferred to other stations.

"As the number of active amateurs in Carnarvon is extremely low, it would be very difficult to engage the services of a beacon custodian.

"In November 1984, the Carnarvon Shire Council advised that as Council-provided accommodation was at a premium, they had no alternative but to utilise the room in which the beacons were located, for another local organisation. The Council had allowed the operation of the beacons on their premises 'gratis', so I agreed to the equipment's removal.

"On Boxing Day, the beacons were de-powered, in preparation for removal. Not wishing to see the beacons 'die an un-natural death', I made enquiries to determine whether any other amateur clubs in the north-west would be interested in operating beacons. John VK6AFA, of the North West Radio Society, indicated their interest, and arrangements were made for members passing through Carnarvon to pick up the equipment. On 14th January, Graham VK6KAE, en route from Perth back to the Pilbara, dropped in, and the equipment was soon after uplifted for delivery to the NWRS.

"I realise many people in the south (and elsewhere) will regret the passing of VK6RTT from Carnarvon, as its monitoring resulted in many contacts on 2m, 6m and 70cm. However, there is not much to be gained when so many people, reporting VK6RTT signals from far afield, are unaware of the fact that no-one is available at the other end of the circuit, to provide two-way communications. With this in mind, the relocation of VK6RTT will open up new possibilities for propagation experimentation, with at least a few amateurs at both ends of the path!

"Finally, I would like to take this opportunity to thank all those who reported the reception of VK6RTT beacon signals over the years, and also to those amateurs with which I personally made contact, as a result of the beacon monitoring. The path between the Pilbara and down south will be a lot more difficult to work, but that's part of the fun of VHF!"

Thankyou for the information Andy, and as representing those people who have been on the receiving end of the VK6RTT signals, may I thank you for your efforts in the past to provide a medium which obviously has assisted so many to make contacts on the VHF bands. We wish you well wherever you may finish up, and hope to hear you on the VHF bands from time to time.

Incidentally, Andy reported six metres was relatively quiet during 1984, with December providing the only Es contacts to VK2, 3, 5, 6, 7 plus one ZL.

CLOSURE

Just before closing may I suggest you be vigilant at least on six metres during March and April as there may still be a few long distance contacts available, particularly out across the Pacific.

Closing with the thought for the month: "You can get friction for nothing — harmony costs courage and self control."

73. The Voice in the Hills

AR

WICEN NEWS

WICEN VK3 ATTENDS "DISPLAN" DISASTER MANAGEMENT SEMINAR AT CROYDON

The format of the seminar was to pose four disaster scenarios over the two days and to split into syndicate groups to discuss how each part of the scenario would be handled by all combating authorities.

The disasters ranged from a rail car carrying LP gas exploding to bush fires and car accidents and chemical spills with toxic gas release.

Groups attending include: *Victorian Police, CFA, SES, Forestry Commission, Red Cross, Public Works, Road Construction Authority, Metropolitan Fire Brigade, MMBW, St John Ambulance, SECV, Community Welfare Services, and a number of shire and council officials.*

Police Superintendent, Don Boisen convened the sessions and the overall conduct of the seminar was by Inspector Bruce Bingham.

Some films were used to graphically illustrate disaster situations. The most horrific one was probably the scene of devastation caused by a "BLEVE" which is the term for a LP gas cylinder which has 'gone-up'. We were told that one of these large rail car tanks are highly dangerous at over 304.8 metres! So the name of the game is to evacuate the area. With chemical spills the same procedure is also the best action.

One scenario included total loss of roads, bridges, power and phones. This one caused considerable discussion as can be imagined! WICEN was asked to put its views on a number of occasions and it was obvious that most of those attending were knowledgeable of WICEN and had a high regard for the role that radio amateurs could play under such circumstances.

At the end of the two days, I was asked to brief the meeting on WICEN's role and so I concentrated on these points:

1 we are a large force of volunteer operators
2 we can provide emergency radio links fairly quickly and easily
3 we have access to our own network of VHF and UHF repeaters
4 we can provide UHF and VHF mobile/portable stations
5 we also can establish HF radio links for short and longer range communications
6 we have operators trained in message-handling and efficient procedures.

DO WE LIVE UP TO ALL OF THESE ATTRIBUTES?

Not always, but we aim for them and more, don't we?

What are we doing about it in VK3? Well, we are embarking on a series of training programmes in the regions.

One was conducted at Pakenham in May 1984. There were sessions on: message-handling procedures, how to set up a station easily in the field, and practical message-handling exercises using 2 metre hand-held sets.

The programme was highly successful and all those attending learned a lot from the experience.

VIDEOTAPE:

An attempt was made to produce a videotape on the spot but due to microphone problems it was not considered successful.

A decision was then made to assess the feasibility of producing at least four training tapes as it was felt that all regions could use them when conducting training sessions.

The proposed format was to design each tape for a playing time of about 10 minutes and to have a response sheet afterwards to recap the key points and to promote discussions. This project has now become a "financial planning" issue to be addressed in 1985.

SOME THOUGHTS WHICH STEM FROM THE MAY EXERCISE, THE OCTOBER DISPLAN SEMINAR AND OTHER DISCUSSIONS:

Should WICEN have more portable repeaters for quick deployment when needed?
WICEN should have a central control location from which stations and operators can be co-ordinated. (Phones and other links can then be established with least chaos under pressure)
Operators need training in efficient message handling
WICEN needs to define its most important user groups and establish close links with them on a personal basis
WICEN stations need to be set up at such places as: St John's HQ, Red Cross HQ
We need battery back-up at repeaters as 240 V power can often fail in disasters
Key WICEN personnel need a clear chain of command and relief staff to cope with prolonged disasters such as Ash Wednesday.
Should WICEN have scanner receivers to allow it to monitor other services traffic.
WICEN can encourage general community awareness of what to do in case of emergency — one good way is to get involved with groups who need communications such as the Alpine rally, bike rides, car rallies, walkathons etc. These all provide us with training experiences in establishing portable stations and operating them. As well, we get message processing practice and in the process build-up good public relations!
WICEN should have a plasticised card (or cards) to give each operator for quick reference on such things as: frequencies, prowords, phonetics etc
Should we identify with abbreviated callsigns? eg "WICEN Warburton calling WICEN SES." This would reduce the length of callsigns and identifies you by ACTUAL location. Then there is NO error in your location! There is a precedent in this procedure; I am told that the Fire Brigade is permitted this type of procedure.

In conclusion I guess we could use the scouts motto — BE PREPARED.

Contributed by Graeme Scott VK3ZR
WICEN (Victoria) Region 13 Co-ordinator

AR

QSP

THE ROYAL WE

I know you have to be rich to afford radio amateur equipment these days, but how is it so many amateurs are rich enough to have a staff to run their station? Clearly they have a staff of technicians as they refer to themselves in the plural "we". "We have a tribander Yagi, and our rig is a Fox Tango 107. We should be happy to QSL via the bureau."

The other possibility is that they are royals and thus have a legitimate right to the use of the plural. But how can I tell whether to say "73 to all of you" or "73 your Majesty"?

Contributed by Sidney Bockner, VK5VN/G2DHI

AR

EASTERN COMMUNICATION CENTRE

COMMUNICATIONS, ELECTRONICS AND COMPUTERS

168 ELGAR ROAD, BOX HILL SOUTH, 3128
Phone enquiries: 288 3107
CONTACT Keith VK3ACE or David VK3UD
HOURS: Mon.-Fri. 9-5.30, Sat. 9-12

BANKCARD WELCOME
OR WE CAN ARRANGE FINANCE

KENWOOD

$225.00

HAMPACK III MODEM

Turn your APPLE II & IIE or compatible computer into a communications terminal. Send and receive Morse code, RTTY and ASCII at any speed from APPLE peripheral slot. Complete with software and instruction manual.

FEATURES ARE:

- ★ *10k receive buffer*
- ★ *10k transmit buffer*
- ★ *Split screen*
- ★ *Save buffers to disk*
- ★ *Retrieve text from disk*
- ★ *Brag statements*
- ★ *Auto CQ, ID, QTH, etc, etc.*
- ★ *Many other features too numerous to mention here*
- ★ *2125-2295 Hz + 1300-2100 Hz Tones (1200-2400) opt.*

COMPUTERS & ACCESSORIES

IBM COMPATIBLE COMPUTERS

Apple Compatible Computers
Vectorio 64Z
Vectorio 64ZS
Do'Lingo 128k
Parallel & RS232 outlets
RGB & PalColour

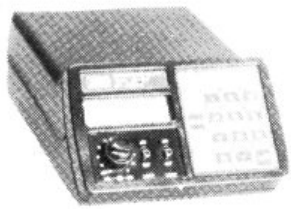
Disc drive printers. Green screen monitors plus most Apple peripheral cards and accessories.

KENWOOD **TS-711A**
2-m All-mode Transceiver

KENWOOD **TS-430S**
HF TRANSCEIVER

KENWOOD
TR-2600A
2-m FM Handheld Transceiver

AOR AR2001 SCANNER



WORLD'S FIRST CONTINUOUS COVERAGE THREE MODE COMMUNICATIONS RECEIVER & SCANNER

Features
- *25-550 MHz Continuous*
- *NBFM — For Communications*
- *WBFM — For BC8TV monitoring*
- *AM for Air Band*
- *20 CH Memory*
- *Clock-Priority CH*

WE SERVICE WHAT WE SELL —

In our fully equipped service department we cater for micro computers, amateur radio equipment, CBs (HF and UHF). Service contracts to trade also.

Car sound components, hand tools, altronic distributors, extensive range of second-hand radios, computers and test equipment.

AR85

LISTENING AROUND

Joe Baker, VK2BJX
Box 2121, Mildura, Vic 3500

It's late afternoon Sunday 11 November, 1984 (Remembrance Day) and earlier, by invitation, I was at the annual break-up of the Buronga Sunday School, where my special job was to run one of my silent films called "The Three Musketeers." It's a job that I take special delight in doing every year as the Buronga Sunday School kindergarten kids, are a wonderful lot. Their teacher is Mrs Cox. They had been awaiting my arrival, and as soon as I got there, I was ushered into a classroom and had my Bolex Palliard 18-5 connected up and operative in a fairly short time. And while I was preparing the machine, Mrs Cox and her assistants tuned the kids up by getting them to sing "We Wish You a Merry Christmas" and other seasonal songs.

The Eleventh Hour of the Eleventh Month came and went without any significance for the kids, and I must confess that I forgot about it also, yet later when I did remember, my mind went back to other places and other years where I have been when Remembrance Day came around.

In other years, when doing this show for the kids I've usually brought along a comedy, for no matter how corny these old silents are, they always get some really good laughs from the kids. One of the most popular has been one, originally made somewhere about 1928 by Stan Laurel and Oliver Hardy called the "Christmas Tree." In this low budget slapstick film, Laurel and Hardy decide to make some Christmas cash by becoming door-to-door salesmen selling Christmas trees from their old jalopy. One customer proves to be a bald man who refuses to buy their trees, so they squirt him with a hose (the kids love seeing that bald-headed man getting a "right dousing"), thereupon he chases them out on the road and proceeds to dismember their jalopy while a sleepy headed local policeman looks on.

Not to be outdone, Laurel and Hardy then proceed to chop his house down with the local constabulary watching with puzzled amazement. It was only a 15 minute film, and its final scene shows a local bobby chasing everyone into a distant horizon. *Why don't they make films like that now?* We could do with a few Mack Sennett comedies, particularly when what we see on the 7 o'clock news is all bad.

Now I've side-tracked myself — let's get back to the original theme — Remembrance Day.

Remembrance Day and Sundays at Pine Creek in the Northern Territory during World War Two was not much different to any other day.

We were surrounded at all times with everything that seemed to be painted khaki in color, with rarely a civilian in sight, except for the periodic visit of an area chaplain such as the Catholic priest who occasionally said Mass at Pine Creek. His parish extended from Darwin almost as far south as Katherine. I can remember attending Mass at Pine Creek in the small tent that had been provided for the chaplain. His alter was his bed on which he had placed a suitcase, with the chalice and Bible on top. His audience consisted of two soldiers — myself and another, and a bicycle bell was used at the Consecration. When the padre was not able to be present, a Corporal held a Bible reading class and all of us — irrespective of religion took part in that.

The monotony of life in the Territory during wartime is something that would be difficult for anyone to appreciate, so when it came time for a soldier to go on leave, it was looked forward to months in advance. In wartime, it was said that the only way you could get out of the army was to die, for there was no other way out. So the next best thing was not to turn your nose up at a spot of leave.

There was this night when I was on duty at the switchboard, when a troop train carrying some hundreds trundled through Pine Creek station on its way south. Heavy rain was falling, and I didn't take much notice of the train with all those lucky fellows on their way to freedom. The train, trundled through and after it was gone — I went back to sleep in front of the switchboard, dreaming that perhaps one day I might be on that train also.

Several hours passed and about midnight I was awakened again by the sound of a train grinding to a halt. Soon an officer presented himself at the signal office, saying that he was the officer in charge of that train. It was the same train that had passed through some hours earlier. It appears that the train had gone on past Pine, to the Ferguson River. On reaching there it was discovered that the river was in flood and the railway bridge impassible. As the line, was a single-track, the train had shunted all the way back to Pine Creek. The officer said that he wanted his troops billeted at Pine Creek, and instructed me to telephone all nearby units to see what could be arranged. The troops were still asleep in the train as it back-tracked to Pine Creek, yet the officer awakened them all requiring them to awake from their peaceful sleep and disembark in the drenching rain so that they could be quartered elsewhere.

The local Area Officer was anything but pleased at this situation, which required the troops from the train to be marched in the dead of night to wherever accommodation could be found for them. Many of them dossed down on whatever floor space was available at the Signal Office as we had no extra beds. Within a few days food supplies in the units that had extended hospitality to the visitors began to run out and there was much discontent in the area.

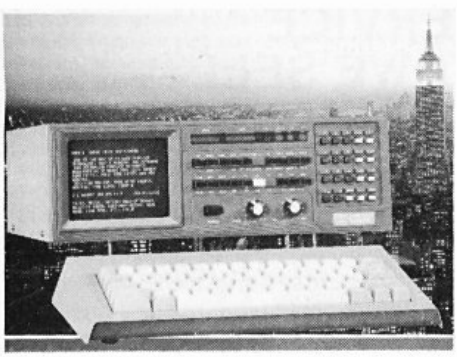
The empty train remained at the Pine Creek station for almost a week, while our linesmen, using railway trollies, did periodic forays down towards the Ferguson river to see how the flood position was. Eventually one day, a linesman climbed a pole and cut in on a circuit to Pine Creek, to ask me to tell the officer in charge that the bridge over the Ferguson was now safe for the train to cross.

Did I tell you about the way I used to do a daily check of the phone lines outgoing from Pine Creek? Well it was a routine every morning that the switchboard operator on duty check all 30 lines at 9 am Adelaide River Time. I say Adelaide River Time because we used to have to obtain a daily time check from 17 lines of Communication HQ at the River, and very often the time as given by them, did not coincide with the time signals from Radio Australia. It was obligatory when doing the daily check, for me to give the Adelaide River time check to the units on the other end of the line, yet I was conscious that Adelaide River Time (official military time) was not always right. So I used to solve the problem by saying something like this *"The time by Radio Australia is XYZ by Adelaide River time is ZYX"* and let them take their pick.

That's all for this time. I've got one or two more stories about my adventures in the Northern Territory, and later there will be much about what happened when I was on Morotai Island in what was then the Netherlands East Indies (now Indonesia). Thanks for all your encouraging remarks, and for those I haven't yet spoken to — I'm usually on every night round about midnight on or near the Cocktail Net on 3.584 MHz.

73 from Joe.
AR

AR SHOWCASE



TONO PRODUCTS

The name TONO is well known to radio amateurs all over the world.

Their latest products, the O -5000E and the 9100, are new additions which would be an asset to any amateur station.

To mention a few of the 5000E features:

AMTOR-mode. Offering error free communication
Selcal
Pre-load function
Automatic CR/LF
Word-wrap around
"Echo"-function
Printer interface
Morse code practice function
Morse code random generator

The last two items are particularly suitable for Morse code classes and individual learners.

The 9100E keyboard and terminal unit with AMTOR offers the most up-to-date computer technology allowing complete automatic send/receive of Morse code, RTTY (Baudot and ASCII) and AMTOR (ARQ and FEC).

The unit can be used as a CRT terminal with RS232C serial interface and can handle up to 9600 Bauds in send/receive.

Using a light pen, graphic patterns can be drawn on the screen and easily sent.

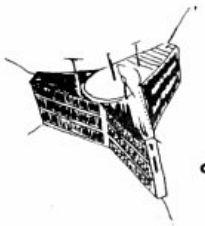
Emtronics, at 94 Wentworth Avenue, Sydney have these units in stock and will only be too pleased to supply you with further details. Emtronics phone number (02) 211 0988.

3WZ
AR

NEW NAME

As of 1st January 1985 the Headquarters of the RSGB will be known as Lambda House. Prior to this it was Alma House.

AR



AMSAT AUSTRALIA

Colin Hurst VK5HI
8 Arndell Road, Salisbury Park, SA 5109

NATIONAL CO-ORDINATOR
Graham Ratcliff VK5AGR

INFORMATION NETS

AMSAT AUSTRALIA
Control: VK5AGR
Amateur Checkin: 0945 UTC Sunday
Bulletin Commences: 1000 UTC
Winter: 3.680 MHz Summer: 7.064 MHz

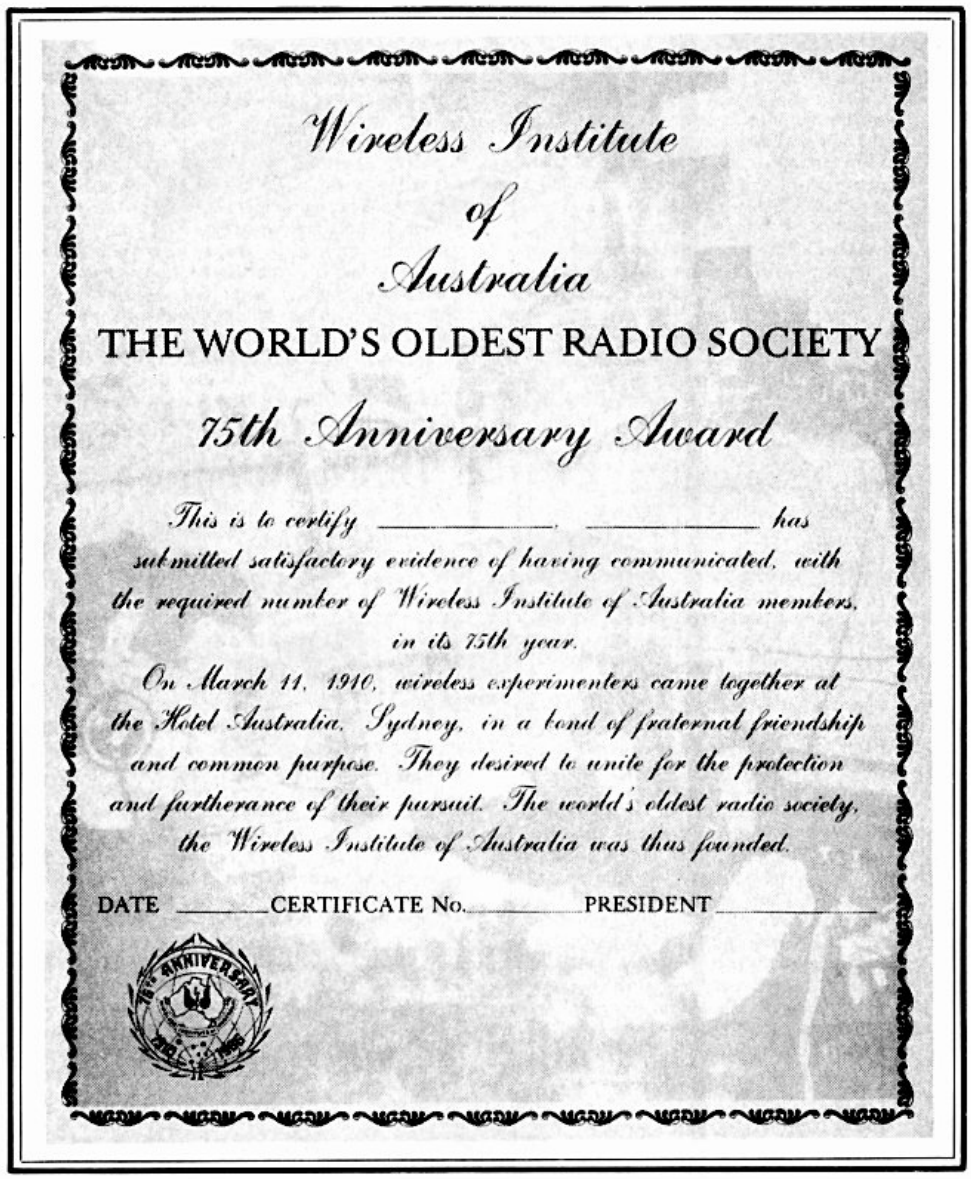
AMSAT PACIFIC	**AMSAT SW PACIFIC**
Control: JA1ANG	*Control: W6CG*
1100 UTC Sunday	*2200 UTC Saturday*
14.305 MHz	*21.280/28.878 MHz*

Participating stations and listeners are able to obtain basic orbital data including Keplerian elements from the AMSAT Australia net. This information is also included in some WIA Divisional Broadcasts.

OSCAR-10 APOGEES **MARCH 1984**

DATE		DAY #	ORBIT #	SATELLITE APOGEE UTC HHMM:SS	SATELLITE CO-ORDINATES LAT DEG	SATELLITE CO-ORDINATES LONG DEG	BEAM HEADINGS SYDNEY AZ DEG	SYDNEY EL DEG	ADELAIDE AZ DEG	ADELAIDE EL DEG	PERTH AZ DEG	PERTH EL DEG
MARCH	1	60	1291	2155:41	3	165	57	26	67	16	81	-2
	2	61	1293	2114:45	3	155	65	19	73	9		
	3	62	1295	2033:49	3	146	71	12	79	1		
	4	63	1296	0813:21	3	321					280	0
		63	1297	1952:53	3	137	77	4				
	5	64	1298	0732:24	3	312					285	8
	6	65	1300	0651:29	3	303					291	16
	7	66	1302	0610:33	3	293			283	4	297	24
	8	67	1304	0529:37	3	284	281	2	289	12	305	31
	9	68	1306	0448:41	3	275	286	10	295	20	314	38
	10	69	1308	0407:45	3	265	292	17	303	27	326	44
	11	70	1310	0326:49	2	256	300	25	312	34	340	48
	12	71	1312	0245:53	2	246	308	32	322	39	356	50
	13	72	1314	0204:57	2	237	318	38	335	44	12	50
	14	73	1316	0124:01	2	228	330	44	349	47	28	47
	15	74	1318	0043:05	2	218	344	47	5	47	41	42
	16	75	1320	0002:09	2	209	359	48	20	46	51	35
		75	1322	2322:39	2	200	15	48	34	42	60	29
	17	76	1324	2241:43	2	191	30	44	45	37	67	21
	18	77	1326	2200:48	1	181	42	39	55	30	74	13
	19	78	1328	2119:52	1	172	52	33	63	23	79	5
	20	79	1330	2038:56	1	163	61	26	70	16	85	-2
	21	80	1332	1958:00	1	153	68	19	76	8		
	22	81	1334	1917:03	1	144	75	11	82	1		
	23	82	1335	0656:36	1	319					279	3
		82	1336	1836:08	1	134	80	4				
	24	83	1337	0615:40	1	310					284	11
	25	84	1339	0534:44	1	300			277	-0	290	19
	26	85	1341	0453:48	1	291	275	-3	282	8	297	27
	27	86	1343	0412:52	0	282	280	5	288	15	305	35
	28	87	1345	0331:56	0	272	286	13	295	23	315	42
	29	88	1347	0251:00	0	263	292	21	303	30	327	47
	30	89	1349	0210:04	0	254	299	28	312	37	342	51
	31	90	1351	0129:08	0	244	308	35	323	43	360	53
APRIL	1	91	1353	0048:12	-0	235	319	42	337	47	17	52
	2	92	1355	0007:16	-0	226	331	47	353	50	32	48
		92	1357	2326:20	-0	216	347	50	9	50	45	42
	3	93	1359	2245:24	-0	207	3	51	25	47	56	36
	4	94	1361	2204:28	-1	198	20	49	38	43	64	28
	5	95	1363	2123:32	-1	188	34	45	49	37	71	21
	6	96	1365	2042:37	-1	179	47	40	59	30	77	13
	7	97	1367	2001:40	-1	170	56	33	67	23	82	5
	8	98	1369	1920:44	-1	160	65	26	73	15		
	9	99	1371	1839:48	-1	151	72	18	80	8		
	10	100	1372	0619:20	-1	326					273	-1
		100	1373	1758:52	-1	142	78	11	85	0		
	11	101	1374	0538:25	-1	317					278	7
		101	1375	1717:57	-1	132	84	3				
	12	102	1376	0457:29	-1	307					284	15
	13	103	1378	0416:33	-1	298			276	3	290	23
	14	104	1380	0337:03	-2	289	274	0	282	11	296	31

AWARDS



ANNOUNCING THE WIA 75 AWARD

A special award certificate has been struck to mark the 75th anniversary of Australia's and the world's oldest national radio society.

Called the WIA 75 Award it will be sought after by both award chasers and those who have not gone in for awards previously.

The handsome award certificate features a sepia background depicting a radio amateur during the pioneer days of our hobby — taken from an actual historic photograph of the late Max Howden VK3BQ in the early 1920s.

The certificate citation encapsulates the scene, desires and aims of those wireless experimenters who met at the Australia Hotel, Sydney, on 10 March 1905.

Nearly two years planning has gone into the award including input from award chasers and DXers aimed at making it a success.

The rules (detailed below) were basically the idea of Gray Taylor VK3JQ/VK4OH — and his daughter Grayleen Taylor used the award artwork as her school art studies assignment.

The WIA Victorian Division took on the task of developing and conducting the award — printing of the certificate has been paid for federally.

At the 1984 WIA Federal Convention a motion proposed by the Victoria Division which spelt out the award's concept was passed unanimously.

RULES:

To qualify, radio amateurs (and shortwave listeners) need to contact (log) 75 WIA members during the period 1 March-31 December 1985.

A contact will only be valid if the WIA membership number is logged. The membership number can either be the one on your WIA membership certificate, or the special number appearing for the first time this month on Amateur Radio magazine address labels.

MR W.M. RICE
54 MAIDSTONE STREET
ALTONA VIC 3018
F 3 00 1 00 VK3ABP
142123

All WIA stations, VK1WI, VK2AWI, VK3BWI, VK4WIA, etc, will use 75 as the membership number.

No more than 30 WIA members may be logged in any one callsign area by radio amateurs permitted to use HF bands and shortwave listeners — this restriction does not apply to Limited Licensees.

Contacts can be made through repeaters, and this is encouraged to enable maximum participation in the award.

CLAIMS:

A log extract of the required contacts and $2 should be sent to:
WIA 75 Award,
Wireless Institute of Australia,
412 Brunswick Street,
Fitzroy, Vic 3065, Australia

PARTICIPATION:

Duration of the award is 10 months which should be more than adequate for anyone to qualify.

Every member no matter where they live can actively support the WIA in its anniversary year by being ready to give their membership number over the air.

Exchange your number during routine contacts or put out a special call "CQ CQ CQ WIA 75" to indicate you're looking for WIA membership numbers.

Some WIA members intend to chase numbers on nets and during/after divisional broadcast callbacks.

This is an international award available to all radio amateurs and SWLs — mention the WIA 75 Award and its rules during your DX contacts.

Contributed by Jim Linton VK3PC

AR

THE QUEENSLAND GOLDEN ATV AWARD

This award is introduced to commemorate 50 years of experimental television in Queensland and is for 70 cm contacts made using fast scan, high definition television systems only.

Successful applicants will receive a certificate awarded by the South East Queensland Amateur Television Group for the accrual of 50 points according to rules.

Award Year: This award shall be available for contacts made between 1 January 1985 and 31 December 1985. No contact points will be considered outside of these dates.

Contacts: A station may be worked once only per day for the purpose of this award. However the same station may be worked many times. Contacts through repeaters or on other than 70 cm do not count. To encourage portable activity, one contact among those claimed **must** exceed 50 km.

Sections: This award is available to both transmitting and receiving enthusiasts in any part of the world as follows:

(a) Transmitting: For 70 cm pictures transmitted which have been successfully identified by another station; claim five points. When the transmission path exceeds 50 km, count ten points instead.

(b) Receiving: For successfully identifying and reporting 70 cm pictures transmitted by another station; claim points as for transmitting.

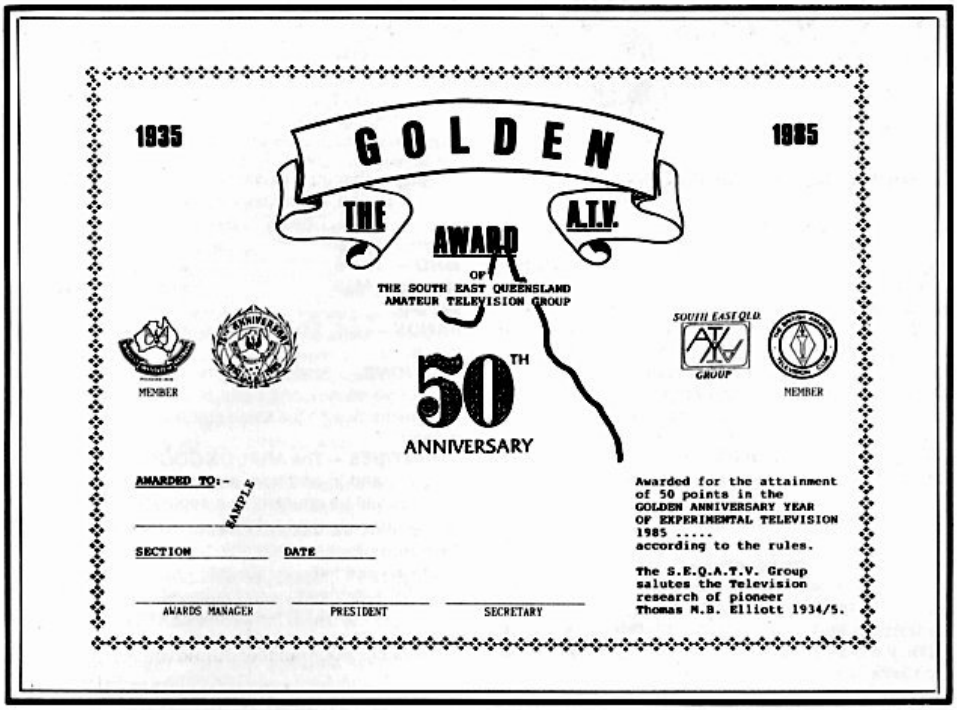
Applications: Applications for this award should include log details consisting of claimant's call sign, call sign and location of station worked (including distance), date and time, points claimed and IRC's or $1.00 to assist with tube postage.

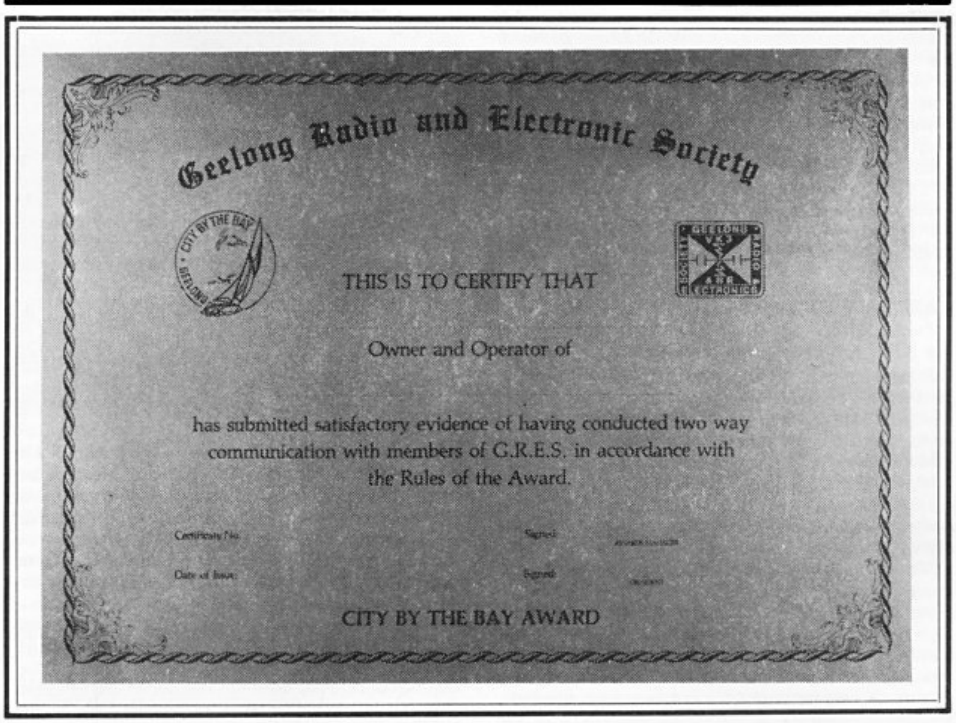
A claim form is available from the SEQATV Group but is not essential provided details as requested above are provided.

QSL cards are not required, but the application should be checked and signed by another amateur.

Applications should be made to: *The Awards Manager, South East Queensland Amateur Television Group, Post Office Box 3, Chermside, Qld. 4032, Australia.*

AR





GEELONG "CITY BY THE BAY AWARD"

The Geelong Radio and Electronic Society is starting an award and hope this effort will be a real success both for the Geelong Club and for amateur radio.

The name will be "CITY BY THE BAY AWARD" and will be on a bronze background, the idea behind this is, that there may be a silver award and a gold award sometime in the future. CITY BY THE BAY is the slogan for the City of Geelong, with a logo and the necessary permission in writing from the Geelong Regional Commission to use the heading and the logo has been received.

The Geelong Radio and Electronic Society has been going for 21 years, as a teaching club for candidates for the DOC exams. There are also special interest groups to cover RTTY and computers.

RULES:

Points will be awarded as follows

Contact with club station VK3ANR	*5 points*
Contact with club members (mobile)	*2 points*
Contact with club members (fixed station)	*1 point*

Number of points needed to gain the award

Club members require	*20 points*
Non club members require	*15 points*
Overseas station require	*10 points*
SWL Stations require	*8 points*

The award will be worked on all amateur frequencies and include, CW, RTTY, ATV and SSTV. A combination of different modes will be accepted. Each award station can only be logged once.

Amateur stations seeking this award, should submit a copy of their log entry to have their contacts confirmed.

SWL stations who wish to gain points towards this award must maintain a record in log form of contacts that they have monitored between the amateur station seeking the award and the club member or club station.

Points will only be awarded to SWL stations which monitor amateur stations actually seeking this award and not ordinary communications between club members.

The cost of the award will be $3.00.

All awards are numbered and the award will finish with the issue of number 500.

Contributed by Roy Whiteside
Awards Manager
Geelong RES
AR

RON WILKINSON ACHIEVEMENT AWARD

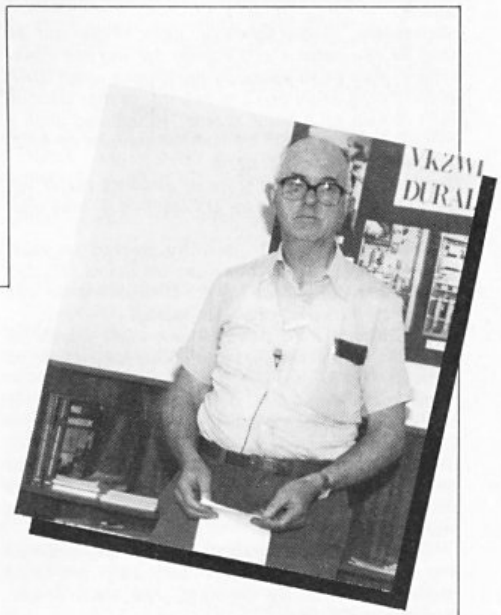
There were two nominations this year from the VK2 and VK3 Divisions.

The Executive decided that the award should be given to **LYLE PATISON VK2ALV.**

For well over a decade Lyle has been the driving force behind the Illawarra Amateur Radio Society's Moonbounce Group.

Lyle's achievements in the Moonbounce area of our hobby, represents and exemplifies the spirit of technical investigation associated with the late Ron Wilkinson.

The Executive, in making this award, are recognising the high standards set by Lyle. **AR**



CONTESTS

Ian Hunt VK5QX
FEDERAL CONTEST MANAGER

P.O. Box 1234, GPO, Adelaide, SA 5001.

CONTEST CALENDAR

MARCH

2-3 ARRL DX Phone Contest
9-10 Commonwealth Contest (rules February)
9-10 QCWA Phone QSO Party
10 WIA 75th Anniversary CW Contest (rules February)
16-17 YL-ISSB CW QSO Party
16-17 Bermuda Contest
23-25 BARTG Spring RTTY Contest
30-31 CQ WW WPX SSB Contest

APRIL

No firm dates or rules for contests to hand for this month. It's anticipated that the Polish CW Contest will be held on the weekend of 6th April and the Phone Section later in the month.

I note from last years calendar that the DX YL North America phone and CW contests were also held in April.

MAY

28-29 CLARA AC/DC Mystery Contest (rules February)

It's also anticipated that the CQ WW WPX CW contest will be held probably on the weekend of 25th May.

RULES FOR ARRL DX CONTEST

Unfortunately I do not have to hand a copy of the rules produced by the ARRL for this contest, however I would like to quote to you from the column produced for CQ magazine by Frank Anzalone WIWY. Incidentally, Frank is most helpful each month as he regularly sends a copy of information contained in his column and I hereby acknowledge his assistance in this regard.

The CW Section of the contest will have been run before you read this and the Phone Section is as listed in the above calendar. Frank writes, *"Rules are the same as last year. However, I strongly recommend that you study the announcement in the December issue of QST for more details.*

"All bands may be used 1.8 thru 28 MHz, but not 10 MHz. Aeronautical or maritime mobile stations cannot be worked for contest credit. Following is a brief outline.

***"Categories**: Single operator, both single and all band. Multi-operator, one transmitter and two transmitters. Also multi-operator, multi-transmitter. QRP all band only. Multi one and two transmitter stations must remain on a band at least 10 minutes once a contact is made. Multi-transmitter stations no limit, but only one signal per band.*

***"Exchange**: RS(T) and state or province for W/VE. RS(T) and power input for DX stations. (Three digit number).*

***"Multiplier**: Each DXCC country worked on each band for W/VEs. DX stations use US States (48) and VE districts VE1-8, plus VO for their multiplier. (9). (Maximum multiplier of 57 per band.)*

***"QSO Points**: W/VE stations earn three points for each DX contact. DX get three points for each W/VE contact.*

***"Final Score**: Total QSO points times the sum of the multiplier from each band. Entries with 500 or more QSOs must include QSO Check Sheet.*

***"Awards**: Certificates given in each category, in each country, and in each ARRL section, plus a wide selection of plaques. Also certificates to DX stations making over 500 QSOs.*

"Disqualification regulations will be strictly enforced and are listed in the official rules. Logs are to be mailed to ARRL DX Contest, 225 Main Street, Newington, CT. 06111."

YL ISSBers QSO PARTY

In this case the phone section will have been held last month, so for those interested in the CW Section here are the details also from Frank's WIWY column.

"CW on 16-17 March. 0001UTC Saturday to 2359UTC Sunday. Rules are quite lengthy. Therefore I suggest you send and SASE to K0RDJ for a detailed copy. The party is open to all, but the emphasis is on membership participation.

"The same station may be contacted on each band for QSO points, but it counts only once as a multiplier. You are required to take two rest periods of 6 hours each during the 48 hour contest period.

***"Exchange**: Name RS(T), SSBers Number, US State, VE Province, country and DX/WK partner, (non members send no number).*

***"Categories**: Single operator, DX/WK partners and OM/YL teams.*

***"Points**: Three points for each member contacted on own continent, six points if on a different continent. Non-member QSOs count only one point.*

***"Multiplier**: Only member stations count as a multiplier. One for each of the following both DX/WK partners worked, each US State, VE Province and DX country worked. Two when DX/WK partners work each other and two if your DC power input is 250 watts or less.*

***"Frequencies**: Use the general class portions of the US bands for both phone and CW. On 20 metres avoid the net frequencies on 14.313, 14.332 and 14.336 MHz. Check 40 and 80 metres on the hour. VHF and UHF may also be used, but simplex only.*

***"Awards**: Special certificates to the overall winners in each category. Regular certificates to the winners in each US State, VE Province and DX country.*

"Logs should be set up as outlined in the 'Exchange' section above. They go to Rick and Minnie Connolly K0RD and NA0V, Star Route No 1, Crocker MO. 65452. USA."

BARTG SPRING RTTY CONTEST 1985

The rules for this contest have been forwarded to me by Peter Adams G6LZB who is the BARTG Contests Manager. Peter writes also regarding RTTY contests. *"At the moment I am preparing my 'RTTY Contest Calendar' for next year, but in order to complete this, I need to know the dates of the major RTTY Contests.*

"It would be very much appreciated if you could let me know, as soon as possible the date(s) of any RTTY contests sponsored by your organisation during the coming year.

"For the moment I just need the title of the contest together with the date(s). Further details and information will be needed later on so that BARTG can give the events as much publicity as possible in our quarterly magazine DATACOM and also via the regular RTTY news — GB2ATG.

"I thank you for your help in this matter and look forward to hearing from you in the near future. In the meantime I close with best wishes to you and the members of your group."

Well, it so happens that whilst the WIA does not directly sponsor any RTTY contests there are at least a couple of RTTY groups operating within Australia. Therefore, if they have not already provided their information to the BARTG as requested above they may wish on the basis of this detail to do so. Any such information may be sent to Peter at the address shown for contest logs as listed in the following rules.

RULES FOR BARTG RTTY CONTEST

(As per copy supplied direct from BARTG)

WHEN — 0200 UTC Saturday 23rd March until 0200 UTC Monday 25th March 1985. The total contest period is 48 hours but not more than 30 hours of operation is permitted. Time spent as listening periods counts as operating time. The 18 hours of non operating time can be taken at any time during the contest period, but off periods may not be less than 3 hours at a time. Times ON the air must be summarised on the summary sheet.

WHO — There will be separate categories for single operator, Multi operator and short wave listener stations.

BANDS — 3.5, 7.0, 14.0, 21.0 and 28MHz amateur bands.

STATIONS — Stations may not be contacted more than once on any one band but additional contacts may be made with the same station if a different band is used.

COUNTRIES — The ARRL DX COUNTRIES LIST will be used, and in addition, each W/K, VE/VO and VK call area will be counted as a separate country.

NOTE: W/K, VE/VO and VK count once each only for QCA purposes.

MESSAGES — Messages will consist of:

(a) Time UTC. This must consist of a full four figure group and the use of the expression "same" or "same as yours" will not be acceptable.

(b) RST and Message number. The number must consist of a three figure group and start with 001 for the first contact made.

POINTS — Points can be claimed as follows:

(a) ALL two-way RTTY contacts with other stations within one's own country will earn TWO points.

(b) ALL two-way RTTY contacts with other stations outside one's own country will earn TEN points.

(c) ALL stations can claim a BONUS of 200 points for each country worked, including their own. Note that any one country may be counted again if worked on a different band but continents are counted once only.

NOTE: Proof of contact will be required in cases where the station worked does not appear in any other contest log received or the station worked does not submit a check log.

***Scoring** — (a) TWO-WAY contact points times the total of countries worked.*

(b) TOTAL country points times 200 times the number of continents worked (Max 6)

(c) Add (a) and (b) together to obtain the final score.

LOG AND SCORE SHEETS: Use a separate sheet for each band and indicate all times on the air. Logs to contain: Date, Time UTC, Callsign of each station worked, RST and message number sent, Time, RST and message number received and the points claimed.

NOTE: Logs received from short wave listeners must contain call sign of station heard, report sent by that station and call sign of the station being worked.

ALL LOGS MUST BE RECEIVED BY 31ST MAY 1985 IN ORDER TO QUALIFY.

Send your contest or check log to: PETER ADAMS G6LZB 464 WHIFFENDELL ROAD, WATFORD, HERTS, ENGLAND WD1 7PT.

If you are one of those readers who take note of just what is mentioned in this column, and not just scan it through quickly, you will have gathered that I seem to be slightly perturbed at the very poor quality of logs which I am receiving for contests. At this stage I would like to retail to you a true story about one occurrence since I began the task of Contest Manager. I use this story as an example only of the type of thing which happens and which is in some ways somewhat disheartening when one tries to do the right thing by a contest entrant and with proper motives for the benefit of all other contesters.

After the Remembrance Day Contest in August 1984 I began to receive logs for that contest. Amongst the logs received early was one, the callsign and name for which will always remain anonymous, which did not measure up in a number of ways to what was required and laid down in the rules. I then sought to

'kill two birds with one stone' and wrote the entrant a letter which was worded as follows: *"Dear . . ., I received your Remembrance Day Contest log in the mail today. I am however returning it to you for the reasons explained below. I wish to explain to you that under the rules of the contest your log in its present form is unacceptable and would be disqualified.*

"The rules for the contest appeared in the July issue of Amateur Radio magazine with corrections to mistakes contained in an insert to the August issue. (I would hasten to point out that I have only just stepped into the post of Federal Contest Manager . . .)

"The sections of the rules with which your log is not in compliance are however quite clear.

"Rule 9. Cyphers: The serial number will consist of THREE figures that will be incremented by one for each successive contact, etc. In other words no RS(T) figures should be added. You have in fact listed VK5QX in two places in your log and claimed that he provided you with 5 figure serial numbers. I can assure you that this was not the case. The same applies to your listing of contacts with VK . . . and VK . . .

"This may appear to be a minor point, and I agree that it is, however, a couple of principles apply here. Firstly if I wish to be pedantic I could simply say that the rules as written should be complied with, (and that also is probably a fair enough requirement) however secondly, and more pointedly I would say that the addition of the extra figures printed amongst a mass of figures simply complicates the issue and makes it somewhat harder when it comes to cross checking of the logs entered for the contest. I will also admit that I heard a number of stations using 5 figure serial numbers, so I guess that I can expect other offenders in this regard. You may well have also used the example Tx log shown in the July issue. This example was definitely incorrect, both as pointed out in the insert referred to and as can be observed by reading the rules.

"Rule 13. ALL LOGS shall be set out as in the example shown and, in addition, MUST CARRY A FRONT SHEET showing the following information in this order: Section, score, callsign, mode, name, address and page tally. Declaration. "I hereby certify that I have operated in accordance with the rules and spirit of the contest." Signed . . . Dated . . .

"It is mainly with respect to this latter rule that your log does not conform and I maintain that with this information spelled out so clearly in the rules it should reasonably be expected that people abide by same. Further, you claim 61 contacts on the SSB mode and then a points score of 20.33 points. How you obtain this I cannot imagine as the rules quite clearly indicate that each contact on this mode is worth ONE point. (See Rule 5 as originally published and also as more completely explained in the insert in the August issue of AR.)

". . ., yours was the very first log which I opened and looked at. It is in its basic form neat and tidy and probably in a number of ways superior to quite a number of logs which I will encounter when I open up other entries. I had decided though to write to you about your entry as an example, and explain where you had not complied. I discussed the matter with a couple of my assistants on the Contest Committee which I have formed and they agreed first of all that your log could be ruled invalid, and one member independently suggested that I write to you.

"Now . . ., I wish to enlist your co-operation, having seemingly been somewhat hard on you to this point with some criticism implied.

"You can imagine that as the new Federal Contest Manager I do not wish to appear either harsh or unfair to entrants. I might also point out though, that if everybody or even a fair proportion of entrants fail to observe the rules, particularly with respect to their log entries, it can make the Contest Manager's job so much more difficult.

"I would thus request that you complete the necessary extra paperwork for your entry, correct the log as necessary and return it to me so that I can accept it as a valid entry.

"I would then propose that I publish a copy of this letter to you, with any item which would tend to identify you removed from the context, in Amateur Radio magazine. This I would intend as a warning and a means of pointing out to others that IF THEIR LOGS DO NOT COMPLY with the rules I will be quite ruthless and disqualify such logs without further ado.

"Whilst I have singled you out for special treatment I can assure you that I have no intention whatsoever to write to each individual who submits a log which is not according to the rules.

"I simply ask that those who enter contests PLEASE read through the rules properly, do their best to understand and comply with them and ensure that their log entries are correct. This will make the job of myself and my assistants so much easier. Yours faithfully etc.

"PS: I realise that I am not aware of your personal situation and that such could perhaps have some bearing on the above situation. So please don't think me too rude in taking this action. I have also made a copy of your log as so far provided by you."

I did receive a reply to my letter, however the person concerned apparently did not properly recognise my motives in writing to him and did not take the opportunity offered to him and nobody else in this way to send back a corrected log. He seemed to still blame both myself and AR for the mistakes which were originally made in the publication of the rules, suggested that as he had not complied with same the best course of action I could take was to disqualify his log and intimated that if he ever went in another contest "and that's a big if" etc.

So, obviously one of my aims, that of offering an opportunity for him to correct the situation as far as his log was concerned, was not achieved. My second aim of obtaining his co-operation to provide a lesson and example to others was only partially successful, however I decided that my effort would not go entirely to waste as I could still use my letter to him as an example to many as to what can go on in the matter of logs. Please allow me just a couple more comments in the way of explanation and to make a few final points.

The log submitted in this instance was apparently done with the aid of a computer. I have a pretty fair understanding of the capability of computers in general although I also realise that not everybody can afford to buy, for their own use, the most expensive units. I do see through the logs submitted, which have been computer generated, that there are some excellent programmes which produce beautiful logs which fit exactly to the rules laid down. There are also many which do not.

The suggestion here is that some entrants may not be as good at programming their computers as are others therefore I suggest that they keep working at the problem but keep their computer generated logs until they get them right. If your computer is not up to it please send instead a properly laid out manually produced log and just use your computer for your own duplicate contact checks etc.

My PS to the letter incidentally was due to the fact that I realised the possibility that the operator concerned may have had some disability unknown to me which may be the reason for his log not fitting the rules. In any case I feel that in this instance I was more than fair in my actions.

I hope that by providing this story I may have been able to awaken in the minds of all of you who enter contests, and not just contests organised by myself for Australian contesters but contests which are conducted and sponsored by overseas organisations, an understanding of the need for logs submitted to be in accordance with the rules and format laid down. After all, I have yet to see rules published for any contest where a log format has not been included as part of same.

Those people producing contest rules do so for good reasons otherwise why bother having any rules at all. Once again my plea, PLEASE DO READ PROPERLY the rules for all contests, make sure that you understand them thoroughly and then follow through by carrying them out to the letter.

If any rules seem to you to be capable of misinterpretation by all means bring such fact to the attention of the applicable contest manager. I am sure that he will be most happy at your show of interest.

VK NOVICE CONTEST 1984

In this issue is contained the results of the VK Novice Contest for 1984. I would like particularly to make some comments regarding the logs submitted for this contest. Vic VK5AGX assisted me greatly by going through the logs initially and pointing out to me a few areas where a number of operators had slipped up. Many of the logs left a great deal to be desired and came very close to receiving disqualification by not adhering to the format laid down in the rules. I will descibe some of the problems encountered along these lines.

One log, the operator will recognise my description, was set out in such a complicated manner that it made it most difficult to check. This operator had gone to a great deal of trouble too. He had a different section of the log for each band and mode and then had split the log up further by breaking each of these sections down into separate pages for each call area. All this was done in a very neat fashion too. Such a log whilst perhaps well intentioned simply does not comply with the rules and although I was loath to do so I decided that I had no recourse other than to disqualify same. Incidentally, this log did not show the full RS(T) number exchange either. Another log was simply a carbon copy, in blue, and so smudged that in some places it was all but illegible. This log was almost disqualified. Another listed times as infrequently as up to 53 minutes apart and some mixed both modes together in the one log despite the fact that the contest rules showed each mode as being a separate section in the contest. Perhaps the need for separate logs for each section must be spelled out more fully although almost everyone else seemed to have recognised this fact.

At least two operators completely ignored the requirement for a front sheet containing details of the entry and the declaration called for. One station incorrectly claimed points for the contacts made totally different to the method laid down. I find it embarrassing to have to disqualify logs but unless the rules are adhered to I have no other alternative except to do so. It certainly would pay for would be contesters to read the rules more carefully and make sure that their log formats do agree with that laid down. As per the disqualifications for the Remembrance Day Contest and again with this contest I am virtually serving notice that if entrants do not conform to the rules their logs will be disqualified. Those concerned this time may perhaps be able to console themselves with the thought that they are simply being made examples of, without any animosity, and perhaps are victims of a situation which has been allowed to develop over the years where contest managers seem to have been prepared to accept almost anything. Again I would re-iterate my opinion that a common standard log sheet made available by the WIA would go a long way to alleviating this problem.

It would appear to be disappointing that so few logs were sent in, a total of only 40, whilst quite a number more did operate in the contest period exchanging numbers. This number is considerably down on last year's entry of 61 and should this state of affairs continue I would query as to whether or not such a contest is at all worth the trouble of organising. Perhaps if this contest can be changed to a date further removed from other contests as I have been trying to ask for it may become much more popular. Only time will tell.

KEITH HOWARD VK2AKX TROPHY

The winner of the contest as top Novice scorer for 1984 is VK5NOD with a total score of 807 points. To achieve this score he operated consistently for somewhat in excess of 19 hours of the total 24 hour period to make 231 contacts. He is to be congratulated on this fine effort and also on his log entry of which he can be proud. It was one of the most tidy logs received. When the trophy is available it will be forwarded along, meantime I will arrange for his certificate to be forwarded to the VK5 Division so that arrangements can be made for it to be presented, possibly through the auspices of the South East Amateur Radio Group at Mt Gambier.

One other most meritorious entry and extremely neat and tidy was that of VK3PFG who was runner up in the contest. He deserves a special mention. Whilst not attempting to take away anything from any of the past winners of the VK Novice Contest I would like to

broach the possibility of changes to the contest rules. Reading into the rules the intent to promote the art of CW Operation, as well as provide a contest basically for Novice operators, it would seem to me that the trophy winner should also have to qualify for same by having submitted a log for both the CW and Phone sections of the contest. I would note that unfortunately several of the logs which were disallowed for this year's contest included both CW as well as phone operation.

INDIVIDUAL SCORES — VK NOVICE CONTEST 1984

PHONE/NOVICE

VK2PZC	333 points
VK3PFG	743 points
VK3PSA	197 points
VK3KAV	104 points
VK5NOD	797 points
VK5NMR	463 points
VK6NLD	290 points
VK6NOX	86 points
VK7NAI	431 points

PHONE/FULL CALL

VK1LF	232 points
VK2BQS	471 points
VK2CDS	464 points
VK2PS	91 points
VK3DAK	538 points
VK5FF	279 points
VK5AGX	180 points
VK5UY	79 points
VK6CZ	730 points
VK7FD	101 points
ZL11M	168 points

CW/NOVICE

VK3PSA	134 points
VK5NOD	10 points

CW/FULL CALL

VK1XX	73 points
VK2PS	79 points
VK2DID	53 points
VK3DNC	96 points
VK3XB/P	50 points
VK4BRZ	88 points
VK5AGX	62 points

PHONE/CLUB

VK2ZL	593 points
VK4WIC/P	153 points

LISTENER

L30371	184 points

The following logs were disallowed for reasons outlined above: VK2KGX, VK2VZB, VK3NLS, VK4NUN and VK5GZ.

TOTAL CONTEST ENTRIES

25 phone. 12 CW. (7 combined Phone/CW.) 2 Club. 1 SWL. Grand Total 40.

AR

EDUCATION NOTES

Brenda Edmonds, VK3KT
FEDERAL EDUCATION OFFICER
56 Baden Powell Drive, Frankston, Vic 3199

ATTENTION TO ALL INSTRUCTORS IN PARTICULAR

Last month I passed on a few hints to those wishing to run classes for novice or AOCP students. Many experienced instructors would be able to add considerably to those ideas.

LET'S SWAP IDEAS

It is very easy to decide that one's own methods and opinions are the best if we have not considered any others. We do not often get the chance to sit in on someone else's class and see their different approaches of explaining a technical point or interpreting a section of the syllabus.

FORTY CLASSES — NO MORE?

I have, on record, the addresses of about forty clubs or individuals involved in some sort of radio class, and there must be many more of which I am unaware.

LET'S HELP NEW INSTRUCTORS TO HELP WOULD BE AMATEURS

It seems to me that there must be a vast store of knowledge and experience around the countryside which could be put to good use, and which would be of great benefit to those trying to set up their first course.

It may be my natural laziness showing through or it may be my personal indebtedness to those who have helped me, but I cannot help feeling that the newcomers should be given as much assistance as possible.

Instructors are not competing against each other — there is no pre-arranged pass rate of say 35 percent of candidates sitting. So anything we can do to improve the quality of instruction available can only benefit the students as individuals and the amateur body as a whole.

REGULAR CONFERENCE ONCE A WEEK

Ideally, I would like to be able to hold regular conferences of all instructors to discuss syllabus interpretation, exam procedures and mutual problems but I realise this is hardly possible with such a number of volunteers scattered throughout Australia. However, as the majority of our teachers are licensed amateurs, we have a communication resource to which no other group of teachers has access.

It is with this in mind that I have been trying to establish a weekly Education Net on 80m, but I have been disappointed with the response.

I have been calling 'CQ Education Net' at 1130 UTC on about 3.685MHz each Thursday evening for some time now.

In response to several comments I have also tried calling near the top of the novice section — 3.610-3.625MHz wherever I can squeeze in — at 1030 UTC, but have had very few replies on either frequency.

Is this just a sign of poor publicity? Are the instructors uninterested in sharing ideas? Or am I just too over optimistic?

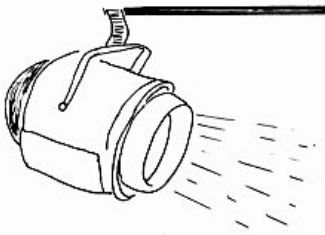
DON'T WHINGE

This net could also be valuable when I need some informal input on matters such as syllabus revision, text books to recommend or exam procedures. It is a chance for those who are most concerned with such matters to be heard. I cannot act on secondhand or overheard WHINGES!!!!

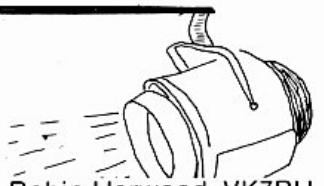
JOIN THE EDUCATION NET AND ADD YOUR POINT OF VIEW

It is also an easy way for you to let me know of classes being run. I would greatly appreciate ANY information about classes for 1985 as soon as possible. In return, you will be rewarded by having your club or class put on the mailing list for sample examination papers as they are produced. SURELY AN OFFER TOO GOOD TO MISS.

AR



SPOTLIGHT ON SWLing



Robin Harwood, VK7RH
5 Helen Street, Launceston, Tas 7250

Several DXers were recently surprised to hear Asian and African signals coming through at around 0200 UTC, which corresponds to midday in the eastern states, over the Christmas-New Year period. Naturally, reception only lasted for a short period, but normally DX signals are absent at that time. The frequencies involved were between 5 and 7 MHz, where very few signals, let alone any from these areas, can be easily heard.

STRANGE PROPAGATION

Naturally, several theories have been advanced explaining why DX from these regions have been observed. They all have credibility but the low sunspot count figures prominently in all theories. I believe that propagation from Africa comes from the Antarctic regions. Transmissions, in particular from Radio RSA in Johannesburg, I have heard, are directed to North America, and the signals on 9.630 MHz around 0200 UTC would therefore be coming off the back of the beams. But propagation is fickle and is not as reliable as the normal transmission paths. All this highlights the unpredictability of shortwave propagation.

Over the summer months, I was unable to receive any worthwhile DX, particularly on the lower frequencies, because of the incessant levels of atmospheric static and noise. Fortunately, propagation opened up on the higher frequencies to give some interesting listening, especially around 1300 UTC. This more than compensated for the loss of the tropical bands. Hopefully by now, the static levels will have quietened down as the equinox is on the 21st of this month, allowing the lower frequencies to be monitored once more.

FREQUENCIES SHIFT

Don't forget that the M-85 period commenced on Sunday 3rd March. That is when there is a major shift of frequencies to take account of seasonal fluctuations. Also, I have frequently noted that the Utility Services alter their schedules to take account of other variables. This is primarily because they are engaged in point to point service and not designed for the general or casual listener. You will have noted that stations are beginning to come in from different locations from that during the summer months. On the 60 metre band in particular, you will begin to observe Latin American as well as Indonesian low powered senders.

SUMMERTIME COMMENCES

Also don't forget that Summer Time commences on Sunday 31st March throughout Europe and in the USSR on the 1st April. Programmes for audiences within Europe will be one hour earlier, which will mean some frequency re-arrangement. Traditionally the USSR makes extensive frequency alterations on the 1st April and the 1st October as well.

NEWS AROUND THE WORLD

I would surmise that the majority of listeners to shortwave broadcasts would mainly tune in for news programmes. Many who have emigrated wish to keep in touch with developments in their homelands. But many others are listening to gain a wider perspective than is provided by their local media sources. One can readily come to an accurate assessment of a situation by comparing coverage of the news from a variety of sources. As the output from the local media sources does somewhat tend to exclusively concentrate on local rather than international issues, it is becoming mandatory to gain a wider base of information before forming an opinion. We do have a wide variety of news and information at our fingertips, instantaneously, instead of relying exclusively on a very narrow, brief encapsulation of what the news is from your local media source.

Now with the advent of RTTY demodulators interfacing with your home computer and TV set, more are tuning in to press services to print up the news before it is broadcast over the electronic media, or later see it included in the print media. But alas, these services are relying more on satellite or cable facilities to transmit their data. Only about 35 per cent of RTTY signals currently being monitored on HF will easily print out, for increasingly the traffic is encrypted or encoded. However, there are still a number of press frequencies still operational. I will not include them here, because they frequently alter both their transmission times and frequencies, depending on the availability of copy. Reuters, for example, has reduced their output on HF to a single operational channel of 18.338 MHz at about 1200 UTC.

Also the French News Agency (AFP) recently discontinued their newscasts from their Hong Kong relay, although reportedly still utilising sites from France and elsewhere. The Korean Central Newsagency (KCNA or ATCC) in Pyongyang, North Korea is a prolific source with several senders comparatively close to the 20 metre amateur band. Try either 13.790 or 13.580 MHz at around 0900 UTC or 14.350 MHz at 1130 UTC. They are usually at the standard 50 Baud rate with a shift of 525 Hz. The Soviet TASS agency can also be frequently observed on a number of channels simultaneously. Try 14.700 MHz around 1200 UTC. They are at 50 Baud with a 425 Hz shift. Other smaller newsagencies are occasionally observed from time to time, yet I find the broadcasting news sources far more reliable than expensive demodulators or VDUs, as one's ears are less expensive and more reliable.

ANTENNA WORKING

Radio HCJB has recently begun to utilise their new 49 metre antenna array. Signals to Europe and the South Pacific will hopefully improve with this latest addition. I have noted HCJB on a new frequency of 6.205 MHz, broadcasting to Europe in English. As well, the station has continued the "Open Line Programmes" where the listeners can phone in and participate. The "Open Line" this month will be on the 23rd March at 0700 UTC on 6.130, 9.745 or 11.925 MHz to the South Pacific, and simultaneously on 6.205 and 9.655 MHz to Europe.

Well, that is all for this month. Until next time, the best of 73 and good listening! — Robin VK7RH. **AR**

INTRUDER WATCH

Bill Martin, VK2COP
FEDERAL INTRUDER WATCH CO-ORDINATOR
33 Somerville Road, Hornsby Heights, NSW 2077

As I type this column, the temperature in the shack is 35 degrees celsius . . . As a matter of fact, it's so hot that the fan on the FT107 came on, and the rig isn't even switched on! I look forward to winter for cooler weather, and for tolerable conditions on 80 metres.

Was waitng last night to check into a net, and the noise was so bad on 80 metres, that the signal only improved about one 'S' point in half an hour, which brought it up to S1! I didn't get into the net.

Not much in the way of reports on 5AN, Adelaide lately, *so can I assume that the harmonic is no longer being heard*? Radio Budapest came up on 14.160 MHz, but am of the opinion this was an honest mistake.

Radio Moscow seems to be having trouble with their spurii again, this time on 7.070 MHz. It's about time their engineers looked to their laurels. SGJ is still operating on 7.060 with CW, in spite of ARRL protests. Am also receiving more and more reports on apparently cordless phone operations, which are causing a problem.

In spite of a well-planned and exhaustive campaign against USSR intruder UMS, the DOC has not replied to my correspondence on the matter.

Have been using the newly-acquired personal computer to assist with Intruder Watch paperwork, which is a help, but am not realising the full potential of the computer yet, as the operator, I'm afraid, is a bit hopeless so far! However, intruder reports are put into the computer as received, which nicely does away with the 12 hour typing job at the end of each month as was the case before the computer.

Received a letter from ZL1BAD recently, and, amongst other things, he mentions the 80 metre band, and repeats that "*. . . in Region 3, the band 3.5 to 3.9 MHz is allocated to the fixed, mobile and amateur services on an equal footing, mutual non-interference, basis. THE ONLY INTRUDER THAT CAN EXIST ANYWHERE IN THE WORLD ARE STATIONS OF THE BROADCAST SERVICE.*"(Bob is Region 3 IW Co-ordinator)

Incidentally, saw a picture of Bob's shack, and am green with envy! Just in passing, this was nearly the last column by this amateur, as only this morning, whilst working on an oscilloscope, I took 240 volts across the chest! Left me with sore arms for a while. Let this be a lesson to us all . . . observe the "one hand in the pocket rule", and never become blasé about mains-supplied gear. It doesn't often give you a second chance.

Been hearing quite a lot of activity on SSTV lately, on 14.231 MHz. Don't mistake these strange signals for intruders, as this is a common frequency for this mode, and I know at least ZL1BT and VK4ZG won't appreciate any deliberate QRM!

Better wind-up now, or the AR Editor will get upset, so 73 for now, please keep the intruder reports coming, and, next time you are QRM'ed by an intruder, don't mumble to yourself in the shack — make a note, and send in an intruder report. All reports are welcomed, and help us to help all other Amateur Operators. See you next month.

AR

CLUB CORNER

LEPARC INCORPORATED

The Lower Eyre Peninsula Amateur Radio Club are planning ahead for South Australia's "Sequi" — Centenary" Celebrations.

They have acquired a twin city in Texas, USA — the City of Orange.

There are two amateur radio clubs in Orange and it is intended to have scouts and guides from the Port Lincoln area speak to their counterparts in Orange during JOTA '85.

Contributed by Jack Kleinrahm VK5AJK
Honorary Secretary — LEPARC Inc.
AR

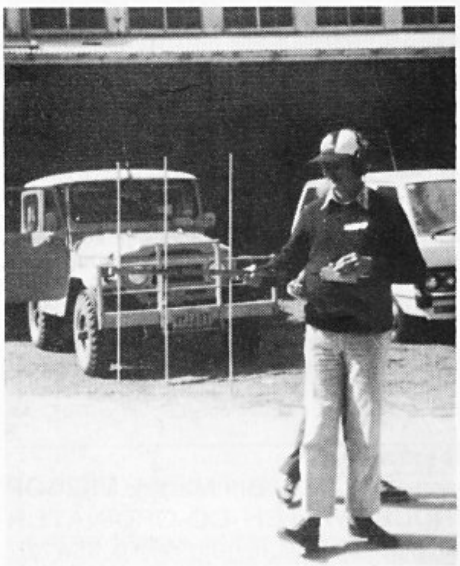
EASTERN AND MOUNTAIN DISTRICT RADIO CLUB

The Annual General Meeting of the EMDRC will be held at 8 pm on Friday the 1st of March 1985 in the Willis Room at the Nunawading Civic Centre, Maroondah Highway, Nunawading.

AR

SOUTH WEST AREA CONVENTION

The South West Area Convention which was held at Young Showground in the Central West of NSW on the long weekend of 29th and 30th September 1984.



Testing equipment for the Fox Hunt.

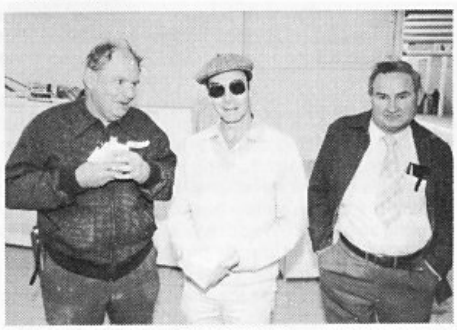
Contributed by Jeff Lange VK2EJJ
Photographs courtesy John Meagher VK2AMV

L to R — Jeff VK2EJJ, Stan VK3BSR and Norman Lange at the Bail Electronics trade display.

A good attendance, and weather on the Sunday was enjoyed by all, with keen interest shown in the various fox and hidden transmitter hunts. An interesting incident being that one of the hidden transmitters was left behind on the outskirts of Young near where it was hidden. Luckily enough it was still there when Peter VK2APP, went to pick it up 2 weeks later.

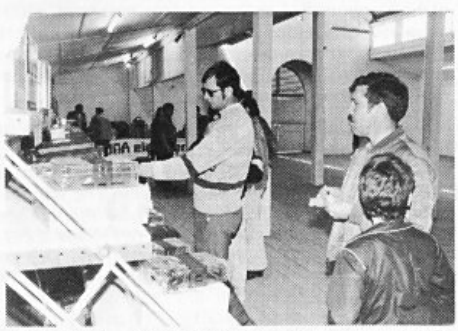
The evening dinner was held at the Guide Hall and enjoyed by all who attended.

Returning from the Fox Hunt.



From left — Peter VK2APP, Ross VK2BRC and Peter VK2DBI.

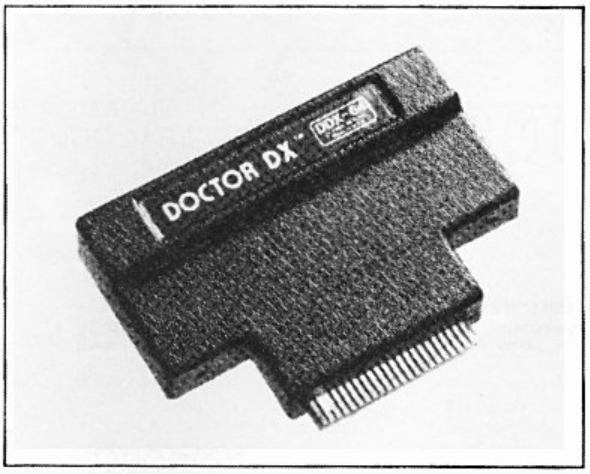
From left — VK2DBI, VK2DDN and VK2BRC enjoy an eyeball QSO at the Convention.



From left — Jeff VK2KBK and Rod VK2DNP.

WORK THE WORLD WITH NO ANTENNA

$158 plus p&p



- *No Antenna!*
- *No Radio Required!*
- *No TVI!*
- *No Landlord Problems!*
- *Operate Anytime You Want!*

DOCTOR DX™

For the active CW operator, there is nothing more fun than operating with the "Doctor DX" CW DX simulator. For the person who has never liked CW, Doctor DX will show you what real fun is. Doctor DX has something for everyone from the aspiring novice to the experienced amateur licensee. And you need no DOC licence to operate Doctor DX!

With Doctor DX, all you need is a Commodore 64 computer, a key (or keyer), and a TV set or monitor. There is no need for an expensive transceiver, amplifier and antenna farm to enjoy the thrill of working "rare DX". No more TVI or dead bands! Doctor DX is more than the most sophisticated CW trainer ever developed, it is your DXpedition ticket to anywhere in the world at a very affordable price.

Doctor DX simulates real HF CW band conditions. All the stations you will work are generated by the computer. As you tune up and down the particular band you have selected, you will hear realistic sounding stations in contact with other stations (some within your skip zone). There is also the normal QRN and QRM one would expect to hear in the real world. All call letters heard are totally random (subject to the country's callsign assignment rules). The prefixes are weighted according to the amateur radio population density, with 304 possible countries represented. The speed of stations operating in the lower portion of the bands is much faster than those operating in the upper band segments. The "operators" are also more polished in the lower portion of the bands.

Radio propagation (programmed for each band) represents what you would expect to hear on a good propagation day at the peak of the sunspot cycle. The propagation follows the internal real-time clock that you set before beginning operation. All the simulated stations you hear (with proper prefixes) are at distances you would expect to hear for the time of day and band selected.

You can learn and enhance your CW operating skills with Doctor DX. Doctor DX will not reward bad habits. Advanced Electronic Applications even offers an awards programme to owners of Doctor DX that work all zones, 100 countries, 5 band Dr DXCC, or Doctor DX Honor Roll.

The Doctor DX CW trainer is a totally new concept in amateur radio. See what all the excitement is about. Send for full details.

Hy-Tech DISTRIBUTORS

BUILDING 51,
ARCHERFIELD AIRPORT, QLD 4108
Ph. (07) 277 5624 Telex 43318

AR85

VK3 WIA NOTES

VICTORIA 150

Jim Linton, VK3PC
DIVISIONAL PRESIDENT
VK3 DIVISION

NEW MEMBERS

A warm welcome is extended to the following who have recently joined the WIA, Victorian Division.

Reece Baines VK3KRB, Joseph Ellul, Peter Hamilton VK3XFO, Christopher Morley VK3YSS, Trevor Paul, Stephen Pierrehumbert VK3XSP, Steven Price, Alan Robinson, Heinz Ruef, VK3DWO, Daniel Vits, C Walton VK3PWA, K West VK3PKW, R Young VK3BIC.

Klaus Brandt VK3DUX, Hartmut Budde VK3DYD, Chinese Radio Sport Association BY4AA, Max Colebourn VK3KMD, Mark Eichler, Harry Groot VK3PHB, Neil Hartley VK3BUL, S Heath VK3VSH, Ben Jones, John Read, Neil Watt VK3XNW, Valerie Watts VK3PVW, Alma Webster VK3PIP, Jan Zukowski VK3XJZ.

R Fenn W0LXQ, Timothy Adams, Michael Bisak VK3XAS, Paul Bradbury VK3XGP, Paul Butler VK3DBP, David Byrne, Joseph Chan, Christopher Chapman, Frederick Elliott VK3ZAQ, John Elliott VK3PEX, Alan Foulstone VK3VAF, Albert Gnaccarini VK3ZZX, Ivanhoe Grammar School Radio Club VK3IE, David Milner VK3KJN, Frederick Naylor VK3AQN, Barry Nolan, Maurice O'Keefe VK3KO, Vivian Ryan VK3VRM, Ross Swinton VK3ZNR, A Verbove VK3YVJ.

New members are always welcome, so join a friend now.

AR

VK4 WIA NOTES

Guy Minter VK4ZXZ
FEDERAL COUNCILLOR
Box 638, GPO, Brisbane, Qld 4001

This year for the first time in a few years VK4 have forwarded two motions to be considered at the Federal Convention.

The motions are as follows:—

MOTION 1

Moved VK4 that all Australian Amateur Radio Contests be frequency restricted such that scoring contacts be limited to no more than two-thirds of each of the amateur bands, with specific frequency limits on each band to be determined by the FCM.

Supporting Comments

1 Contests encourage the use of our Amateur Radio Bands and therefore must be supported by the majority of operators. However the right to use non-contest spectrum by those who do not wish to participate in contest operation should, at all times, be respected, and as such, reasonable spectrum allocation should be made for each group.

2 Participation in Amateur Radio Contests does improve the skills of contacting, operating, log keeping and QSLing and in the best traditions of amateur radio must therefore be supported.

3 It is known that a significant proportion of Amateur Radio Operators enjoy lengthy QSOs, and do not wish to be involved in time-efficient contest-type QSOs. These operators do not fully enjoy their chosen hobby during contest periods. The specifying of at least one-third of available spectrum/per band for non contest use will ensure that amateurs who are not involved in contests will still be able to enjoy their hobby.

4 For some time now radio amateurs throughout the world have been requesting some contest-free operating spectrum space. Whilst the WIA strongly supports the concept of contests, the rights and privileges of the individual must, at all times, be respected, and as such, this proposal will receive the support of all operators.

MOTION 2

Moved VK4 that an Australian Standard on packet radio be established, such protocols to be widely circulated to ensure full Australian participation in this aspect of our hobby.

Supporting Comments

1 Through the use of satellite systems, all such user systems should be fully compatible with recognised international standards.

2 Unattended operation is now a vital part of our hobby eg repeaters, and as it is an integral part of packet radio, suitable protocols should be established by user groups (to be further co-ordinated by FTAC) to ensure efficient use of our spectrum.

AR

WA BULLETIN

Fred Parsonage VK6PF
Acting Secretary
Box 10, West Perth, WA 6005

NOTICE OF AGM

Notice is hereby given that the AGM of the West Australian Division of the Wireless Institute of Australia will be held on Tuseday the 16th April 1985 at the Institute of Engineers, 712 Murray Street, West Perth at the conclusion of the General Meeting. Business to be transacted will be:

1 Consideration of Councils Annual Report
2 Election of Office Bearers vis;
a President.
b Vice President.
c 7 Other Councillors.
3 Election of two Auditors.
4 Appointment of a Patron.
5 General Business which has been duly notified.

Agenda items will be advised on the Divisional news broadcast on the three Sundays prior to the AGM.

Members unable to attend may appoint a proxy in writing in the following form:

I ..... being a member of the Institute hereby appoint ..... also a member of the Institute to act for me as my proxy and in my name to do all things which I myself being present could do at the AGM of the Institute to be held at the Institute of Engineers, West Perth on Tuesday the 16th April 1985.

Signature .....

Witness .....

Date .....

Nominations for Council must be tendered in writing to the Secretary, signed by two members and the nominated members acceptance 42 days prior to the AGM.

General Business Agenda items must be tendered in writing to the Secretary signed by three members 42 days prior to the AGM.

AR

TASMANIAN NEWS

NOTICE OF MEETING

The Annual General Meeting of the Tasmanian Division of the Wireless Institute of Australia will be held on Saturday, 16th March 1985, commencing at 2pm.

The venue will be the Beaconsfield Council Chambers in Eden Street, Riverside, Launceston.

All welcome. Come along and have your voice heard in your Institute.

NOTICE

All copy for inclusion in May 1985 Amateur Radio must arrive at Box 300, Caulfield South, 3162 no later than midday 22nd March.

The VK2 Mini Bulletin, usually on these pages, has been incorporated into the special Seventy-Fifth Anniversary Feature. See pages 27 to 37.

FIVE-EIGHTH WAVE

Jennifer Warrington, VK5ANW
59 Albert Street, Clarence Gardens, SA 5039

**Standing L to R — Dick Boxall VK5ARZ, Janet Bulling VK5NEI, John Bulling VK5KX.
Seated L to R — Pat Boxall and Gillian Wardrop at the WIA Picnic, November 1984.**

From left — Trevor Wrigley VK5ATW, John Butler VK5NX, Ian Fisk VK5IF and Mitch Hamilton VK5AZM at the Picnic.

At the November General Meeting we were unable to conduct a business meeting after the speaker because everyone (or most) left with the speaker and we were unable to raise a quorum. As we cannot run the Division without the business side, it has been decided to start the meetings at 7.45 pm in future, and to hold the business first. The speaker will start around 8.30 pm (earlier if there is less business) and if the business looks like going over time, then it will have to be postponed until later that night or some other appropriate time.

DIARY DATES

26th MARCH General Meeting (speaker unknown, listen to the Broadcast for details) (and don't forget those nominations for Council positions).
18th-23rd MARCH Jubilee 150 Launch in Rundle Mall. Listen to the Broadcast for details.
23rd APRIL. AGM (not 25th as published in the Events Calendar).

AR

PRESTIGIOUS AWARD FOR AWARD CUSTODIAN

Dr Peter Barclay VK3FR, was the recipient of a prestigious Australia Day inscribed medallion presented by Dr John Zillman, Director of the Bureau of Meteorology, at a gathering in excess of 150 staff members on the 25th January, 1985.

The award was instigated by the Australia Day Committee in 1984 for ones leadership and dedication to their chosen profession. In presenting Peter's medallion, the only one presented within the Meteorological Bureau this year, Dr Zillman praised the work of Peter and his colleagues on a specific project over the last few years and stated "While I know you see that these are very much team achievements, I am sure there is a universal agreement that the most significant contribution over the years has come from your personal leadership and high professional standards which have set an excellent example to your colleagues throughout the Bureau".

Peter, well known in amateur circles, including being custodian of the Keith Roget Memorial National Parks Award, has been with the Bureau for 22 years. In that time, apart from being with many departments, he has seen service overseas, firstly as an exchange scientist for twelve months in the USA in 1969 and later in Pakistan in 1978.

Congratulations Peter.

AR

Photograph by Ken McLachlan VK3AH

Peter (L) receiving the Medallion from Dr John Zillman, Director of the Bureau of Meteorology.

LETTERS TO THE EDITOR

Any opinion expressed under this heading is the individual opinion of the writer and does not necessarily coincide with that of the publisher.

MORE DRIVE IN 85

We, as licensed Novices, wish to raise a few ideas which we believe, if addressed, could lead to an increase in WIA membership and more enjoyable participation of amateurs who are striving to broaden their knowledge.

In the June 1984 AR, it was stated that we need to get new members or there will be an increase in subscription. Again in January 1985 AR, we find the Federal Office offering incentives to join or re-new subscriptions to WIA — yet another plea for membership.

It is contended that the greatest potential area for new members is the "new novice" and especially one who is from "outside" the electronic world. These people wish to learn and enjoy their new hobby and one or two complimentary copies of AR could help encourage these people to become members.

To do this there is a definite need to cater to his bands. What good is VHF, UHF, RTTY, Satellites, Computers, Competitions and the many aspects of advanced (Full Call) activities if the reader fails to understand terms like Keplerian elements; Points and Multipliers; or the time variations between satellites. They may have some passing interest but do not help the new or old Novice who finds the full call beyond his aptitude and time available with other commitments of family and possibly even finances. Look at last year's issues of AR and work out the percentage of articles directed to the Novice or SWL who is feeling his way into their chosen hobby. What we ask is that the experienced remember that they were once new, when maybe the pace was slower — your problems, aspirations and queries are ours today. Help the many new or outside Novices because we are the membership of the future.

We realise the cost of running the WIA and these costs must be paid by the members, but give the illusion of providing something more than a $35 pa magazine subscription. Perhaps the possibility of extra benefits to members could be explored for example, perhaps the retail price of the call book should be more ($10) with a reduction (half price) for WIA members.

The figures clearly show that many do not consider the WIA worthwhile as they have either left or not joined because nothing of interest was offered, or they were told it was of no value. Obtaining articles is an acceptable and real problem which will require some effort.

Both of us are office holders in our local amateur radio club and support the WIA so we hope this will be taken in the spirit in which it is written because we have thought about this for many months. At a recent club meeting we outlined to members the points covered in this letter and those present could accept the points raised.

In this 75th Anniversary Year there could well be a renewal of interest that could give the WIA the opportunity to bring new members to the fold.

Yours in radio,
Concerned Novices,
VK5NIK VK5PWA
Signed Ian Phillips VK5NIK
Box 425,
Port Lincoln, SA, 5606
AR

POLARISED SOCKETS

May I congratulate VK2BZC on bringing up the subject of orientation of pins on Clipsal 495 polarised sockets in WICEN News AR, Jan. 1985.

I have had it pointed out to me, rightly or wrongly, over many years, that in the world of amateur radio, the vertical portion of the T is positive and the horizontal is negative.

Would someone care to give the amateurs, present and future, a definite and authoritive ruling so that an Amateur Radio Operators Standard, may be applied.

In the interests of equipment safety, and otherwise, the standard for radio use of 2 pin polarised Extra Low Voltage plugs and sockets should be recorded under Data Sheets in catalogues and handbooks and be given far more publicity.

More and more of these fittings are coming into use with the construction of heavy duty 13.8V regulated power supplies.

73
Ross Dowsett VK6RD
53 Festing Street,
Albany, WA 6330.
AR

REPEATER MOUNTAINS

In the north east of Victoria there are two 2 metre repeaters, one at Mount Wombat VK3RGV Channel 6650 and much further up into the mountains to the east of Wangaratta and south of Wodonga on Mount Big Ben is VK3RNE Channel 7000. Mount Big Ben will be joined by another repeater on Mount Mittamatite, which may even be coupled to Mount Big Ben providing approval is given.

Mount Big Ben repeater, uses a Philips FM-828 transceiver, has an Effective Radiated Power over a ½ wave dipole of about 35 to 40 watts. In the near future an improved antenna will be placed on a new tower about 30 metres higher than at present and will have an ERP of about 120 watts.

All of the above work is expected to give the repeater a better range and make copy solid in some doubtful areas. As most would be aware the north east of Victoria is mountainous and as such many areas do suffer with weak signals. The use of efficient antennae on vehicles and at least 10 watts is desirable if you want to be heard. A handheld sitting on the seat of a car with a rubber ducky antenna is not the way to work this repeater. When climbing mountains on foot, however, handhelds have proved very useful and have featured in rescue situations. Yours faithfully,
RD Champness VK3UG
(Sec/Treas NE Zone Repeater Group)
31 Helms Court,
Benalla, Vic. 3672.
AR

CONGRATULATIONS

I was sorry to see just recently that Tony Tregale VK3QQ was relinquishing his post as Federal EMC Co-ordinator. From what I have seen of Tony's efforts I believe we have been most fortunate in having someone as enthusiastic as he has been, over what is probably one of the most critical periods in the on going battle to achieve reasonable Electro-Magnetic Compatibility between various electronic equipment, eg Video Recorders and radio transmitting stations.

Congratulations Tony on the work you have done, I hope that we can find another keen and capable person to fill your shoes. Yours faithfully,
RD Champness VK3UG,
31 Helms Court,
Benalla, Vic. 3672.
AR

THANK YOU AMATEUR OPERATORS AND RADIO CLUBS:

1984 has come and gone, and with it the 27th Jamboree on the Air, which once again, has been an outstanding success, thanks to the support of amateur radio operators and radio clubs.

27,800 Scouts, Guides, Leaders and supporters took part in the 27th Jamboree on the Air from just over 500 amateur radio stations, thanks to the generosity of 1,050 operators who gave so freely of their time and facilities. 5,700 contacts were logged, of which 1,000 were DX, down 50 percent on last year, and due no doubt to the poor propagation conditions this year. However, ever resourceful and "prepared" the Scouts and Guides turned these conditions to their own advantage by enjoying longer contacts with Australian stations and some extremely long QSOs were reported.

Some idea of the contribution by amateurs in Australia can be gauged from the results of a survey conducted last year by the World Scout Bureau into participation in JOTA in the various scouting nations. Not surprisingly Australia polled very well, as will be seen from the following figures given by the Bureau with amateur station involvement indicated in parenthesis in each case. When one looks at the population of some of the other countries, particularly the USA and the UK, Australia did very well. Figures for the five leading countries were as follows — United States, 75,000 (2,500); Australia, 20,000 (460); Netherlands, 15,500 (210); Brazil, 15,000 (650); and United Kingdom, 12,500 (455).

The National Opening Ceremony from the grounds of Government House, Canberra, again played a significant part in this year's Jamboree, with technical facilities again provided by the Royal Naval Amateur Radio Society, under the direction of Rear Admiral Jim Lloyd (Ret) — VK1JL. Again Their Excellencies gave the Opening Addresses supported by the Australian Chief Commissioners of Scouts and Guides.

Some operators were again confused by the operating procedures during the call backs after the Opening Ceremony. Perhaps it should be pointed out that to provide the widest possible coverage and to include facilities for novice operators, the National Opening Ceremony and call backs go out simultaneuosly on three separate tranceivers (live) on three separate frequencies — 7.090, 14.190, and 21.190 MHz. There does not appear to be any problem with the Opening Ceremony itself, but when all the call backs are accepted they are acknowledged on the three frequencies but accepted on a single frequency when the Official Guests reply. The silence on the other two frequencies apparently causes some concern and we will be looking at ways in 1985 of keeping the listening stations on the "quiet" frequencies informed as to what is happening at that time. However, despite all that, the call backs in 1984 were the best ever, and we were, in fact, inundated being able to accept only a representative number from each State in the limited time available.

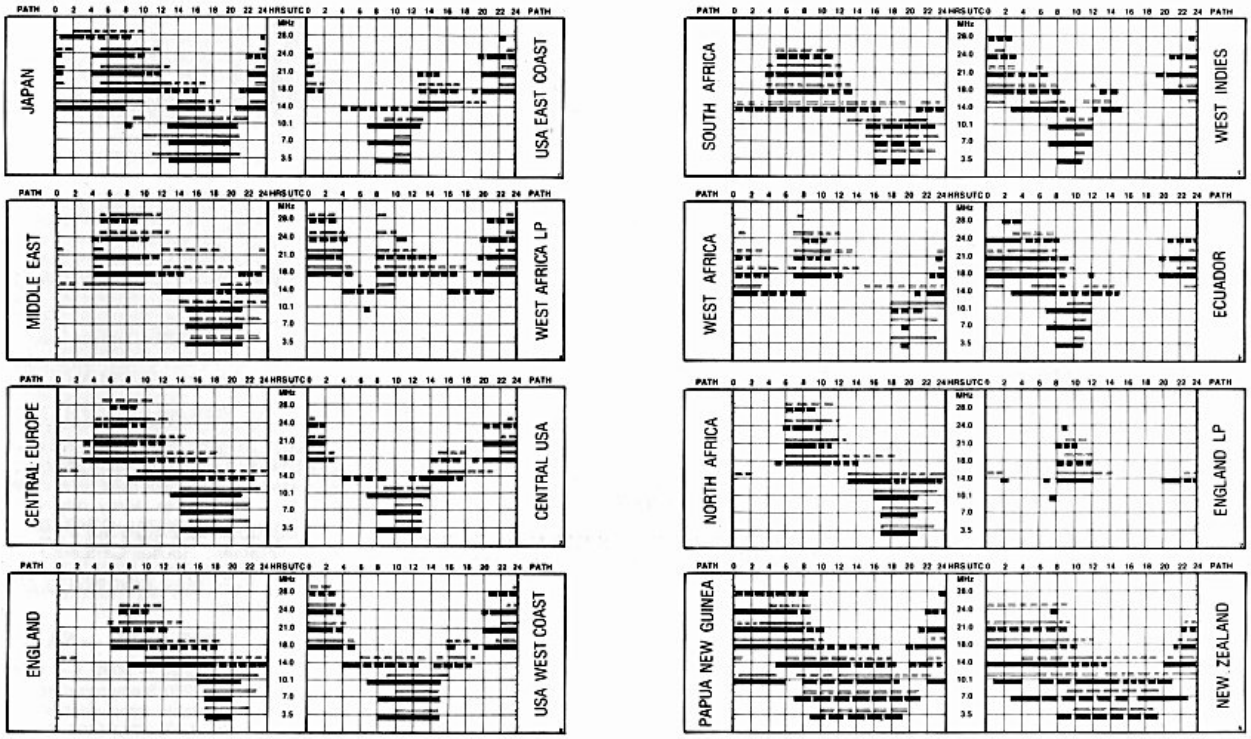
The Report on the participation in the 27th Jamboree on the Air was my last report as National Co-ordinator. After 21 years in that appointment, I tendered my resignation as from 31st December 1984. I am very pleased to be able to announce that my successor is the Branch Commissioner for Radio Activities in the Western Australian Scout Branch — Peter Hughes VK6HU, a well respected Scouter and well known amateur radio operator in the VK6 Division. Like myself, Peter has been associated with JOTA since the first one in 1958 and is Australia's longest serving Branch JOTA Organiser, having held that appointment since 1969. Peter takes over my appointment from 1st January 1985 while I continue in my support role only until after the next National Opening Ceremony.

So let me express once more my appreciation for the efforts of the amateurs in supporting not only the 27th JOTA but for the invaluable help and support since my appointment as National Co-ordinator in 1964, and for the 6 years prior to that when I was associated with JOTA at state and scout group level in Queensland. Please continue to give Peter Hughes the same support in the years ahead!

Noel Lynch VK4BNL,
National Co-ordinator 27th JOTA,
15 Noeline Street,
Dorrington, Qld, 4060
AR

IONOSPHERIC PREDICTIONS

Len Poynter VK3BYE
14 Esther Court, Fawkner, Vic, 3060



LEGEND

From Western Australia (Perth)

From East Australia (Canberra)

Better than 50% of the month but not every day (continuous lines)

Less than 50% of the month (short broken lines)
Mixed Mode Dependent on angle of radiation (long broken lines)

Paths unless otherwise indicated lie
LP = long path/ all paths are short path.
Predictions reproduced courtesy of the Department of Science and Technology, Ionospheric Prediction Service, Sydney.
All times in UTC.

Bill Goes Shopping

Ted Holmes VK3DEH
20 Edmunds Street, Parkdale, Vic. 3195

Bill Blitheringtwit managed to locate the building housing the famous Richard Smith establishment and felt happy with anticipation as he wedged his ancient Holden into the car park. In his pocket he had a list of things he wanted and he had even remembered to bring some money. He hadn't forgotten that argument last time about the out of date Bankcard!

He entered the swing doors and almost immediately found himself trapped in the revolving turnstile. Pushing this vigorously aside, he instantly discovered himself out in the street again. Another attempt and he succeeded in entering the shop.

It was quite some time since he had been in the place. He hadn't been game enough to return since that unfortunate incident with the loudspeaker unit. It had been standing on the floor and Bill had, quite inadvertently, put his size nine boot through it whilst wandering around gazing skywards. The speaker had sailed through the tair, as though propelled from a gun, and demolished a plate glass display cabinet. The result had been rather spectacular. Crashing glass fragments flew in all directions and the silence afterwards could be felt, as all eyes turned towards him. Luckily for him, nobody was quite sure what had really happened and Bill, of course, was all innocence.

This time most of the assistants seemed to be new. All, that is, except one. He spotted Bill, frowned, and came over to him.

"Can I help you, sir?" he enquired politely. But his eyes never left Bill's boots.

"Looking for a few bits," said Bill, handing over his now crumpled list.

The assistant took out his glasses and read it. Then he went to some shelves and pulled out some boxes, taking components out as he did so.

"There we are, sir," he said. "Anything else?" It was obvious that he wanted Bill out of the place as rapidly as possible, but Bill had other ideas.

"Think I might have a wander round," said Bill, handing over his money and collected his tightly stapled plastic bag of bits.

The assistant said nothing. Instead, a grey ashen look came over his normal healthy features and he turned and he turned and whispered something to a fellow assistant. The latter reached down and switched on a surveillance camera and both gazed fixedly at a TV screen as the overhead camera followed Bill's progress around the store.

However, the camera couldn't follow Bill everywhere and it was whilst he was out of camera view behind some shelves that there was a sliding sound, followed by a heavy thump. Assistants rushed from all directions and they found Bill staring down at the remains of an expensive oscilloscope draped over one of his boots. Whilst they watched, almost paralyzed with amazement, a piece of the tube fell from the number 9 with a gentle tinkle.

"Didn't touch it," Bill declared firmly. "Damned near broke my toes. Lucky for you it didn't!" Indeed this would have been a miracle, since Bill's boots were lined with steel toecaps.

Then he strode decisively out, with numerous sets of eyes following him. A brief struggle with the turnstile and he was out in the street again. He felt slightly annoyed. What was the matter with them all? Couldn't a fellow just look at things and occasionally try some of the knobs and switches? Damn it all! they never seemed to worry in disposal stores. . . .

Silent Keys

It is with deep regret we record the passing of —

MR ALFRED ISAACS **VK2AVI**
15-01-85

HAMADS

PLEASE NOTE: *If you are advertising items FOR SALE and WANTED please write each on separate sheets, including ALL details, eg Name, Address, on both. Please write copy for your Hamad as clearly as possible, preferably typed.*

- **Please insert STD code with phone numbers when you advertise.**
- Eight lines free to all WIA members. $9 per 10 words minimum for non-members.
- Copy in typescript please or in block letters double spaced to PO Box 300, Caulfield South 3162.
- Repeats may be charged at full rates.
- QTHR means address is correct as set out in the WIA current Call Book.

Ordinary Hamads submitted from members who are deemed to be in the general electronics retail and wholesale distributive trades should be certified as referring only to private articles not being resold for merchandising purposes.

Conditions for commercial advertising are as follows: The rate is $22.50 for four lines, plus $2 per line (or part thereof) minimum charge $22.50 pre-payable. Copy is required by the deadline as stated below indexes on page 1.

AMIDON FERROMAGNETIC CORES: Large range for all receiver and transmitter applications. For data and price list send 105 x 220 SASE TO: RJ & US IMPORTS, Box 157, Mortdale, NSW 2223. (No enquiries at office: 11 Macken Street, Oakley, 2223).

"FROM PASTURES GREEN TO THE SILVER SCREEN" A 20th century autobiography comprising 156 episodes and 273 illustrations by John W Gerard VK2ADN (since 1936), a wireless experimenter since 1917, who joined the original 'Picture Show Man' (Lawrence Penn) in 1924 and became a radio amateur in 1936 and an active member of Lions International since 1953. After almost a lifetime devoted to wireless, moving pictures and scientific achievements, the author spent 5 years transferring memories of a series of exciting experiences and remarkable events to paper. Price $14.95 plus $2.50 postage and packaging. Available from John W Gerard, East Bonville Road, Bonville, NSW. 2441.

□ WANTED — ACT □

CATSWHISKER CRYSTAL DETECTOR. Prefer barrel type. Ted VK1AEP, QTHR. Tel: (062) 41 7376.

ICOM HF LINEAR AMPLIFIER, solid state. Barry VK1ABR, QTHR. Tel. (062) 72 4172 BH or (062) 86 5652 AH.

TOWER. A 35-45' tilt-over or crank-up tilt-over tower for HF Yagi installation. Details of condx, age, price and estimate freight costs to Canberra are requested. Also any of the following valves wanted. 6AZ8, 6BN8, 6CL6, 6CD6, 6EB8, 12AT7, 6CQ8, 6U8 and 811. Info to Dan VK1ST, QTHR. Tel: (062) 58 5664 AH.

□ WANTED — NSW □

COMMERCIAL LOW BAND FM TCVR — converted to or suitable for conversion to 6m. Also Kenwood SP-520 or SP-820 spkr unit. Peter VK2APJ, QTHR. Tel: (047) 59 1651.

KENWOOD 2400 HANDHELD or similar unit. Also Kenwood 599 tx. VK2BYK, QTHR. Tel: (047) 21 4205.

SOLID STATE LINEAR AMP — 200/250W. Needed for RTTY contacts. Exchange "Microbee" IC32 computer, stacks software. Cash either way or purchase outright. Quote price to VK2BBD, Longford, Bendemeer, NSW. 2352.

YAESU QTR 24 CLOCK. In good condx. R Murphy VK2ERM. Tel: (075) 36 4915.

□ WANTED — QLD □

CIRCUIT DIAGRAMS of AMR-300 rx, 62 and A-510 tx/rx, AT-21 tx, Type 5 pwr supply for ex-serviceman/restorer. Pay good price. VK4EF, QTHR. Tel: (07) 38 1803.

FR-100B/FL-200B — FRDX-400/FLDX-400 or FTDX560 or similar. Also Eddystone GC rx EG-680. State price and condx to VK4CB, QTHR. Tel: (07) 202 6566.

VALVE TESTER, old valves (any condx) for collection. Old radios, JR colour TV circuits publications, Dick Smith 27MHz rx and tx tester for CB radios. VK4DY, QTHR. Tel: (071) 96 1186.

□ WANTED — WA □

ANY INFORMATION on Heathkit general purpose CRO, Model 10-21. Arthur VK6SY, QTHR.

□ FOR SALE — ACT □

COLLECTOR ITEMS: Crystal set, a good example of home-brew, probably 1920s vintage. Has varicouple honeycomb coils, square busbar, Hiz phones etc. WWII army telephones. One each JAP, Aust'set "F" MKII, teleset "D" MKV. Philips batt charger type 1016/1017, probably 1920s or early 30s vintage. Prices negotiable. Ted VK1AEP, QTHR. Tel: (062) 41 7376.

ICOM 740 fitted with 455kHz SSB and CW narrow filters. $850 ONO. Barry VK1ABR, QTHR. Tel: (062) 72 4172 BH or (062) 86 5652 AH.

□ FOR SALE — NSW □

FT-901 WITH MEMORY. CW filter and YD-148 desk mic. $795. FL-2100B linear amp. $300. VK2AAB. Tel: (02) 487 1428.

DECEASED ESTATE OF VK2ETV — Kenwood PS-30 power supply, Kenwood TR-7800 2m tcvr, Kenwood 530S tcvr, Kenwood VFO-230, Kenwood AT-230 ant tuner, Kenwood HC-10 digi world clock, Kenwood DM-81 dip meter, Kenwood MC-50 mic, Yaesu YM-38 mic. Clipsal brass key, Centron "Big Dummy" 1kW dummy load, National DR-48 comm rx. Black CTW all band ant. Rob VK2ERA. Tel: (02) 692 0886.

KENWOOD TR-2500 2m FM h/held complete with access. 240V charger, hel ant, LH-2 leather sheriffs case, PB-25 batt pack, BT-1 batt case, MS-1 mobile stand, SMC-25 spkr/mic, h/book. $395 ONO. VB-2530 25W linear amp to suit. $85 ONO. TM-201A compact 2m FM 25W mobile tcvr complete with hand mic, boom mic, SP-50 mobile spkr, h/book. $385 ONO. All exc condx VK2AQW, QTHR. Tel: (02) 969 2160.

KENWOOD TS-130S TCVR — power supply, desk mic and headphones. $595 ONO. Fred Jenkins VK2BFJ.

KENWOOD TS-520S TCVR. Very good condx with CW filter, ext VFO, digi readout, mic and manual. $575 the lot. John VK2NV, QTHR. Tel: (02) 525 4652.

MICROBEE IC-32 COMPUTER — lots cassette software. All manuals plus working RTTY decoder. $375 post paid. Will exchange 2m all mode tx/rx. VK2BBD, Longford, Bendemeer, NSW. 2352. All mail answered.

OSCAR 10 ORBITAL DATA FOR YOUR QTH, 1 mth $10, 2 mths $18, 3 mths $25. Send SASE for sample printout. FT-243 xtals. 20 diff freq between 3.5 and 6MHz. $10. Ian VK2ZIO, QTHR. Tel: (02) 680 2112.

SHACK CLEARANCE. Hustler LBTV with 80m resonator. $65. Kenwood TR-2200G 2m, 12 ch and MC-10 mic $90. MFJ-410 professor Morse $110. Random CW and keyer $110. MK-701 sideswiper CW paddle $25. Denis VK2AOO. Tel: (063) 62 5977.

SWAN 240 SSB TCVR — 80, 40, 20m with ext VFO, power supply and spkr. Manual included. $150 ONO. Comms rx DX-150A, 0.5-30MHz. Ex condx $100. Calculator Hewlett Packard HP-38E with power supply. Faulty display. Also 2 incomplete AWA MR-6A low band tcvrs with circuit diagram. What offers? Bruce VK2BHW. Tel: (02) 46 3706.

□ FOR SALE — VIC □

IAMBIC KEYER — MFJ-408 delux, as new. Full lambic or semi-auto modes. 8-50 WPM, speed meter, weight control, practice side-tone. $150. Graeme VK3BGH. Tel: (03) 870 4371 AH.

IC-251A — 144MHz all mode tcvr. 12 mths old and little used. Mutek frontend for IC-251A, new and boxed. Belcom 70A 432MHz tcvr, all mode base station. Have worked 67 countries on Oscar 10 with this rig. VK3XEX, QTHR.

ICOM IC-560 6m FM/SSB/CW tcvr $350. Yaesu FT-901D tcvr, fitted with AM/CW filters, 10/24MHz WARC bands $720 ONO. Ten Tec Argonaut 509 tcvr $240 ONO. Icom IC-290A 2m FM/SSB/CW tcvr $350. Trio 9R59D rx $80. Yaesu FRV-7700 118-130, 140-150, 50-59MHz converter $75. Helray Mk11 peak power indicator. 200W model $20. Hi-Mound HK-702 Morse key (marble base) $25. 2 Type 15 teletypes $25 each. Creed 7B teleprinter $15. Swap 4CX350A valve for 4CX250B valve or sell for $20. Eric VK3BXA, QTHR. Tel: (057) 65 2384.

ICOM 22S. As new, no mods. $200. Hy-Gain TH3 jnr. Good condx $170. VK3EC, QTHR. Tel: (03) 541 2598 BH.

SHACK CLEARANCE. Superb DX rig. FT-102 as new. 1.8 kHz SSB narrow filter. Full workshop manuals. Will demo $750. FT-101ZD as new, used only as stby rig. Full shop manuals $550. Yaesu YM-38 desk mic $30. Shure 444 desk mic $75. Barry VK3XV, QTHR. Tel: (03) 527 4029 after 5 pm.

SYSTEM 80 COMPUTER — w/expansion unit, monitor, 2 disk drives. NEWDOS-LDOS-many programmes. $900. John VK3WZ. Tel: (03) 557 1771 AH.

□ FOR SALE — QLD □

ICOM 502 in good condx with h/book. Home brew transverter 52-144MHz. Lin amp 25W, 52MHz. Lin amp 25W 144MHz. All transistorised, neat clean units. All for $225. New 866A valves. Many others new and used. Enquiries welcome. VK4ZAL, QTHR. Tel: (07) 269 5832.

YAESU FT-7B. Less than 2 hrs tx time. Ideal for novice ot mobile. No mods. 13.8V. $400. VK4UQ, QTHR. Tel: (075) 45 1708 evenings.

□ FOR SALE — SA □

COMPUTER — TRS 80 — MOD 1 — LEV II — 16k and monitor. Ex condx $250. Siemens printer in ex condx $60. Self contained portable (typewriter k/b) CW generator FIFO mem/buffer. 5-60 WPM $120. FRG-7 gen com rx $250. All ONO. Sundry components (new and used) all in good condx with other items. Tom VK5NTJ. Tel: (08) 356 3078.

PHILIPS FM-321 70cm FM tcvr. 80ch mod. Remote control and rx preamp fitted. $200 ONO. Good condx Trevor VK5ZTJ. Tel: (08) 254 7876.

ADVERTISERS' INDEX

KENWOOD

MARCH SPECIALS

KENWOOD QUALITY AT AFFORDABLE PRICES

$899

Save $100

TS-530SP HF Transceiver

with built-in power supply

$520

Save $60

TR-7950 2 metre FM TRANSCEIVER

45 watts output, 21 memory channels

$629

Save $70

R-2000 COMMUNICATIONS RECEIVER

worlds leading all mode receiver
Receives 150 kHz to 30 MHz

Offer valid until 31/3/85 or until stocks are sold

Sold and supported by PARAMETERS PTY LTD

Melbourne Office: 53 Governor Road, Mordialloc, Victoria 3195. Phone: (03) 580 7444
Postal: PO Box 122, Mordialloc, Victoria 3195 Australia Telex: AA 33012
(Incorporated in Victoria)

PARAMETERS PTY LTD
PERFECTION IN MEASUREMENT

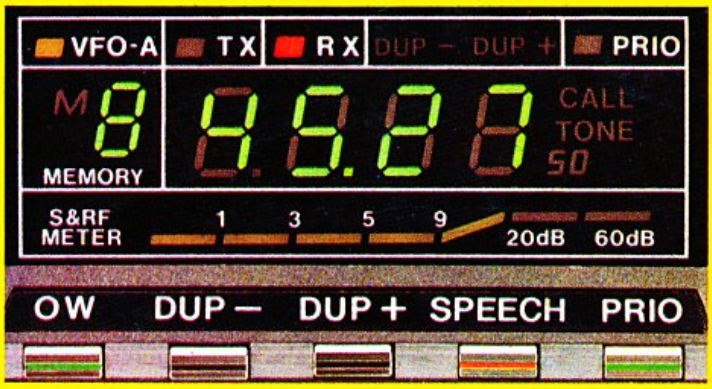
AR85

ICOM IC-27A

The Most Compact 2 Meter Mobile!

Now ICOM presents an important breakthrough in two-meter mobile communications, the IC-27A. The smallest two-meter mobile available, the IC-27A measures only 38 millimeters high by 140 millimeters wide. As an added bonus, the IC-27A, through ICOM engineering, is able to contain an internal speaker to provide ease of mounting and make the unit one small compact complete package.

25 Watts. In such an incredibly small package, the IC-27A is able to provide 25 watts of output power. And even though the IC-27A is the smallest available two-meter mobile unit, it has sacrificed none of the features found in fully featured VHF mobiles.



32 PL Frequencies Option. The IC-27A is available with optional 32 PL frequencies ready to go and controlled from the front panel knob. Each PL frequency may be selected by the main tuning knob and stored into memory for easy access along with frequency.

10 Memories. The IC-27A has 10 tunable memories available to store receive frequency, transmit offset, offset direction, and PL tone.

Memories are backed up by a lithium backup battery, which will store memories for up to seven years.

Speech Synthesizer. As an added plus, the IC-27A features an optional speech synthesizer to verbally announce the receiver frequency of the transceiver through the simple push of a button. This allows the operator to hear what frequency he is operating on without looking at the transceiver.

Scanning. Included with the IC-27A is a scanning system which allows scanning of memories or scanning of the band. Each memory may be scanned between programmable limits.

Priority Scan. Priority may be selected to be either a memory channel or a VFO channel. By using sampling techniques, the operator can determine if a frequency he is interested in using is free or busy.

Microphone. Each IC-27A comes complete with a microphone which includes a 16-button touchtone pad for access to your favourite repeater or for dialling through an autopatch.

THE ICOM 27A is a superior piece of amateur equipment engineered and built by ICOM to provide superb performance in the mobile radio environment. See the IC-27A at your local ICOM dealer.

The IC-27A comes complete with microphone. Note that the microphone shown is an optional model.

Discover a new deal with ICOM AUSTRALIA PTY. LTD.

7 DUKE STREET WINDSOR 3181
VICTORIA, AUSTRALIA
TEL: (03) 529 7582 TLX: AA 35521 ICOMAS

ICOM
The World System

WARNING: When purchasing an ICOM unit, please confirm that you are dealing with an **Authorised ICOM Dealer,** as the ICOM Warranty applies **only** to units supplied by ICOM Australia Pty. Ltd., to Authorised ICOM Dealers.
All stated specifications are approximate and subject to change without notice or obligation.

Adgroup ICM 725